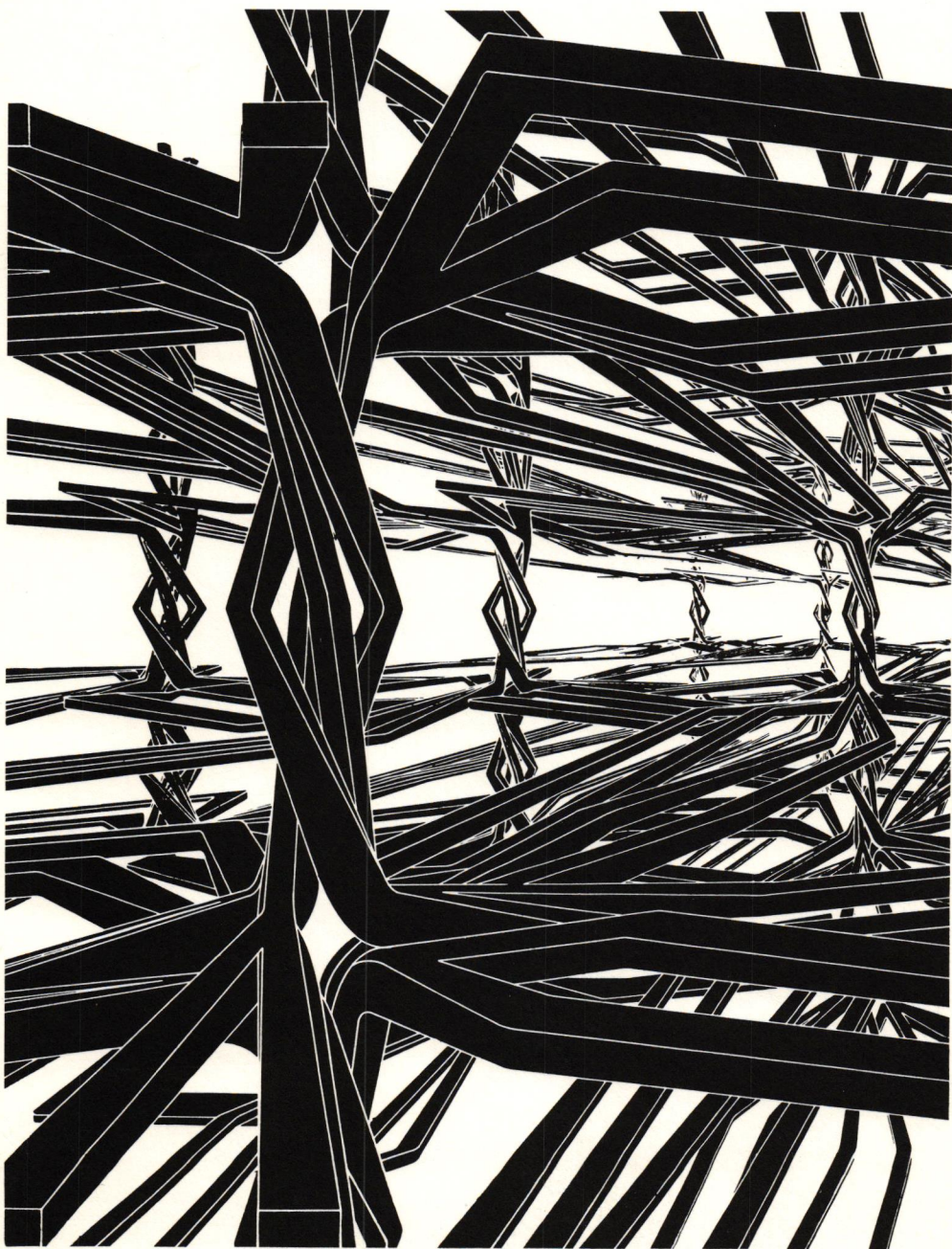


Nov 1993

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**CALIFORNIA**



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Cover: Konrad Wachsmann, detail of a perspective study of a structural concept—a structure built with a single standard element—illustrating the inquiry into what might be achieved by industrializing building. Full original drawing appeared in Konrad Wachsmann, *The Turning Point of Building* (New York: Reinhold Publishing Co., 1961).

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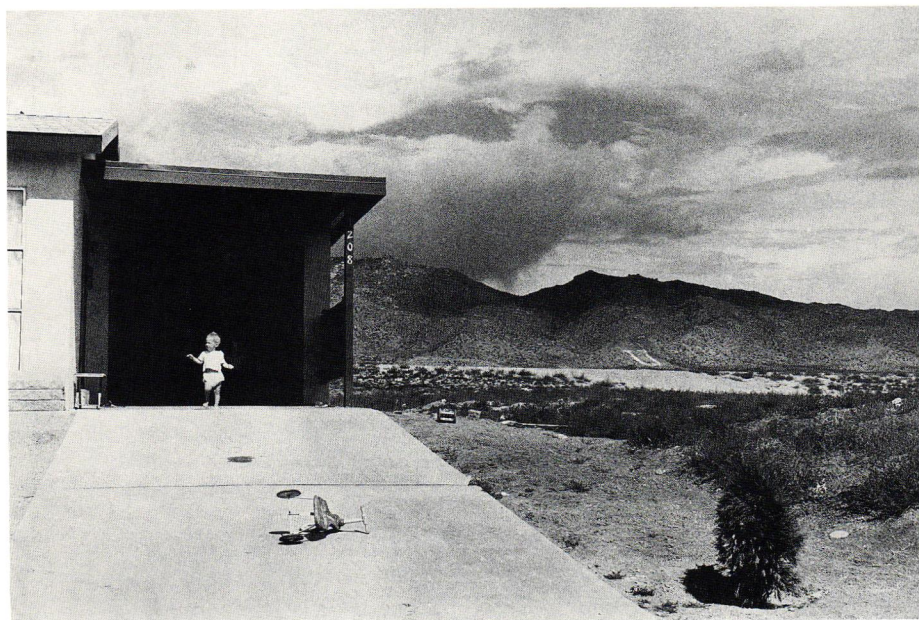
# From the Editor

With this edition, *Architecture California* examines the nature of the relationship between *design* and *inquiry*. The authors, while quite diverse in their approaches, present their belief-in-common that design is by definition a practice of inquiry. With the help of these authors, designers are urged to explicate their practices.

Esherick presents the notion of a continuum along which various actions in the design process slide, their position and movement depending on the degree of uncertainty in the task. Design inquiry, then, is a self-perpetuating never-ending process, fundamental to the practice of architecture. Martin places inquiry in the context of the collective striving for knowledge that advances architecture as a field. Thus, the challenge he poses is to develop

mechanisms for the sharing of knowledge within and across communities of discourse. Miller Pollin and Bell challenge traditional notions of inquiry, each presenting an approach to the discovery of new spatial relationships: Miller Pollin's formal experimentation is subjectively rather than objectively generated; Bell's theory-construction simultaneously develops ambiguously related fragments of inquiry. Silverstein, by means of autobiographical narrative, shares his methodical search for understanding of the relationship between theory and practice.

Roesling and Willis reassert the place of spirit and nature as universals in guiding design inquiry, while the manifesto by high modernist Konrad Wachsmann reminds us of the faith our 'community of inquiry' once held in



Garry Winogrand, gelatin-silver print. Courtesy, the Museum of Modern Art.





Don Bartletti, Migrant workers temporary shelter. Courtesy, *Los Angeles Times*.

common in the integrity of technological principles and the beauty this integrity could produce. Anderson and Skoven highlight extremes in the variety of approaches to inquiry that are currently being used by architects: Anderson (using the indirect knowledge that can be gleaned from social science research) presents the 'scientific' theories used to guide marketing strategies that foreground built-environment design; Skoven (advancing the urgency of direct knowledge) gives testimony to support the belief that designing can only be learned by experiencing existing environments and encoding them in memory by means of a perceptual mode of inquiry. The combined thrust of these articles is to invite all practitioners to use the present period to intensify inquiry through design, to make experiments, and to share the insight gained from divergent practices.

Continuing our query into the trials of urban life in Los Angeles, *etcetera* allows us to put on urban historian Mike Davis's x-ray glasses. His provocative vision of the latent sins of an

urban ecology based on fear challenges us to halt complicity in the constitution of a future "carceral city" and reenvision our role in the fabrication of third millennium urbanity. "Public investment in the remediation of underlying social conditions," the rejected strategy for developing Los Angeles, has never seemed a more compelling choice. Collins's delightful narrative about the search for meaning in the term 'contextual' highlights the frustration many feel with the unfulfilled potential of professional award programs developed on the basis of substantive criteria, and thus he supports Mike Martin's challenge to cultivate communities of inquiry in design.

"Typophoto," Laszlo Moholy-Nagy's 1925 essay, resurrects the discussion about photography begun a year ago in *Architecture California*. It closes this edition on the note of experimentation that has been fundamental to the great contributions made through design inquiry.

Lian Hurst Mann, AIA

# Designing and Inquiring

Joseph Esherick, FAIA

The topic proposed for these papers is “Design as Inquiry,” further refined by the additional terminology “Learning through Speculation.” Combinations of the two proposed topics are interesting and perhaps enlightening: *designing as inquiring*, *designing as learning*, or even *designing is learning*. My preference is for the verb form—*designing and inquiring*—making clear that we are dealing with action, with a process. *Speculation* seems too passive, more leisurely, and less purposeful (unless one is a developer).

A typical diagram of the design process suggests that it is a lineal and sequential process: first we inquire, then we design. But anyone who works at designing knows that it is not so simple. Inquiring and designing are hopelessly complicated processes, iterative and only in part sequential. The reasons are simple: We never have enough information or the right information to design, and it is through tentative design trials that we come to understand what additional questions, inquiries, and data might be needed. Suppose one were to try to design without inquiry: as soon as a tentative design proposal is made, then the basic situation is changed; another possibility is added, and we are obligated to reflect on the new situation, to compare, and to inquire why one is better than the other. Further, the new possibility changes our own perceptions of the issues at hand. Thus, are not design and inquiry inseparable? Are they not one and the same thing, terms assigned to different ends of a process continuum that has unclear issues at one end and some action or decision, no

matter how tentative or final, at the other end?

The typical diagram in product design will have at the end a testing function. Criticism or post-occupancy evaluation is a possible building design testing function, but each tests only the end product and does not look at the design and inquiry process. If something is wrong, did it go wrong in design or inquiry? Might we not have asked the wrong questions? E. A. Singer argued that to answer a question completely demands that we ask the next question—which suggests that we need to take inquiry as seriously as we take design.

Backtracking.

Why do we design in the first place? To improve or somehow alter a given situation, that is, to make it more comfortable, workable, efficient, beautiful, or to bring it some order, to make it more understandable—broadly, to make it fit better with the given setting, to reveal and clarify immediate or more general realities. The satisfaction of functional and technical requirements would seem to be basic to the design process. But what is interesting is what lies beyond the basic—the revelation of underlying realities of the temporal world and the design’s attachment to that surrounding world. It is this revelation that gives the design its life and vitality. It is persistent inquiry and reflection that leads us beyond mere essentials to the revelation of expanded possibilities.

Each tentative design encourages questions and further inquiry, not just on the part of the designer, but of all



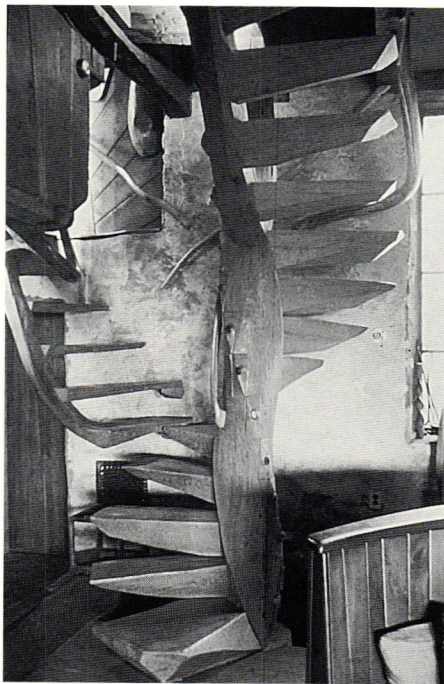


Wharton Esherick Studio, Paoli Pennsylvania (1926 ca. 1960). Built over a period of thirty odd years, each addition is affected by what went before it—in effect, a commentary on, or extension of, the original design.

the others involved, thus avoiding an illusory finality to the design (and to the design process) and acknowledging an inevitable open-endedness. In any case, once the design is built it is no longer the maker's; it becomes the property of users and viewers to perceive and interpret, as Umberto Eco has argued in his 1979 essay "The Role of the Reader." Given the vast differences in the perceptions of users, it seems futile to expect that everyone will see design in the same way, through the same eyes, and with the same feelings. Albert Speer and his boss tried this, but it never worked. Acknowledging, indeed, even encouraging this inevitable repossession of a design by others can be a great virtue: the design stripped of finality can be received alive by anyone.

Backtracking again.

Design problems can be divided into two groups. There are those that are the refinement or styling of something that already exists: a spoon. Secondly, there are design problems for



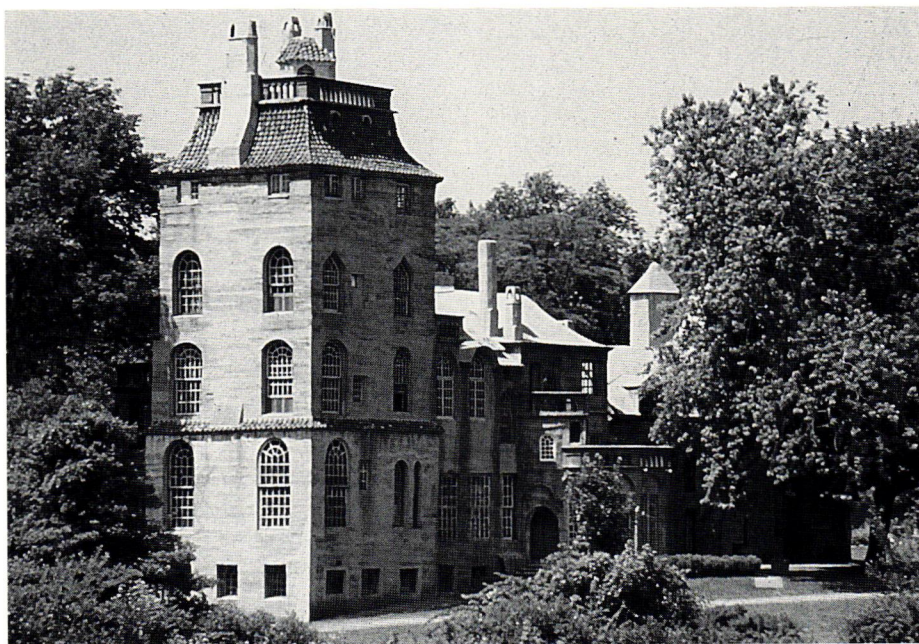
which there exists, in the extreme, only a mission statement: a space station.





Admittedly, there is no neat division between the two groups, existing as they do on a continuum, but the proportionate energy that is put into inquiry varies enormously. The balance of design and inquiry will vary according to the issues at hand. The spoon has already been designed and all we can do is reshape it, style it. No models existed for the first space stations, and so not only were different proportions of design and inquiry required, but also different *kinds* of inquiry.

Further, beyond the specific and immediate inquiry directly associated with a project or issue at hand is the ongoing critical thought and inquiry in which the immediate project is inevitably embedded. There is no *tabula rasa*. Neither designing nor inquiring is pure; both are contaminated or limited by our education, whether Beaux-Arts or organic or rational (or some mix),

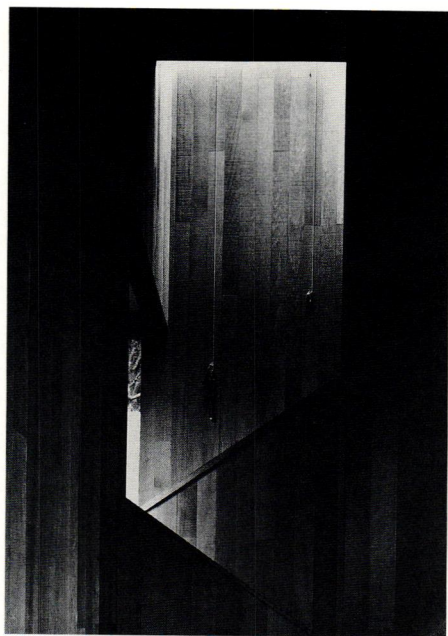


Below, Fonthill, Henry Chapman Mercer House, Doylestown, Pennsylvania (1908-1910). Built essentially room by room, vertically and horizontally—inquiry-design-inquiry-design until finished. Above, Mercer Museum (1910-1912). Built by Mercer to house his collection of tools—some 42,000 items. The manner in which the collection is displayed demands thoughtful inquiry on the part of the museum visitor.



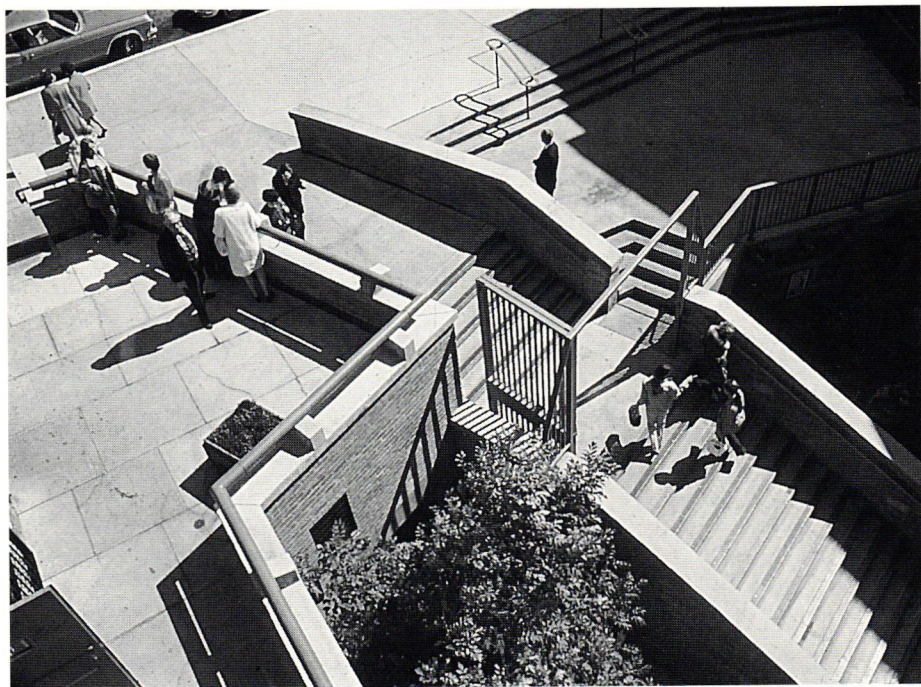
whether mainstream or eccentric or idiosyncratic. Our designing and inquiring are also affected by what we see and what we read, by photographs and drawings and every building that we encounter, and by something as specific as the kind of stick drawings our computer programs generate. Sticks on the computer screen become pipes or structural shapes flying through space, inside or out. We are also affected by, or limited by, our experience. But this contamination does not have to be negative if we recognize that the people who see and use our designs, like us, do so based on experiences that affect their perceptions and judgments as well.

Designing and inquiring and particularly speculating are usually thought of as the singular activity of an individual. Today, this is rarely the case; the



Cary House, Joe Esherick, FAIA, Mill Valley (1962). Interior. The design aims to be a minimal interruption in the qualities of the site, to reveal, through light and views, the site more than the building, in effect to dematerialize the building. Photos, Roy Flynn.





Cannery, Joe Esherick, FAIA, San Francisco (1964). Cannery Walk Stair. The Cannery was unique in being three stories of independent retail; somehow people had to understand that there was something up there. Observation and inquiry led to the argument that what attracts people is people. The stair is intended to attract people by being fun to use, in effect to become a stage with continuous impromptu theater, attracting people on balconies above to enjoy watching the 'actors'.

reality is that increasingly we work in teams—designing and inquiring together. Managing each requires an openness and dialogue because of the inevitable and welcome diversity of the backgrounds and perceptions of the different designers.

So where are we?

This piece itself is a case of design as inquiry, an attempt to understand the question, piecing together possible responses, inquiring again and again as to whether or not the response usefully answers the implied question. This piece may turn out to be more useful to the writer if it stimulates in him questions about how we design. What do we *really* know about designing, about what *really* happens in the act of designing? I read recently that a jazz musician described improvisation as 80 percent listening as opposed to playing a set

piece that only requires listening to the beat. Listening, attentiveness can be described in general, but how can we gain an understanding of the actual improvisation, the *design* of the music? The design of architecture poses the same problems: attentiveness we can understand, but how can we get beyond romanticizing about what we actually do in designing in order to arrive at a genuinely useful understanding?

One thing we might do is document the design inquiry process as we go—while we are in the middle of it, with all the lack of clarity there before us—rather than at the end when everything seems clear, or if it is not clear we convince ourselves it is. If we did this conscientiously and as accurately as we could, we might build up solid evidence about how and how not to inquire and design.



# The Community of Inquiry in Design

W. Mike Martin, AIA

*All made objects owe their existence to some form of design activity. Even the oldest and commonest of artifacts are no less the products of design than the artifacts of high technology are the products of modern design methods.*

Petroski, 1992<sup>1</sup>

The intellectual community of the architecture profession, within which knowledge is generated, has received considerable attention in the past decade. This attention has ranged from attempts to establish an appropriate research agenda to rigorous studies regarding how we practice and deliver our services as architects. It is the intention of this article to focus specifically on the relationship of two concepts central to the making of buildings—design and inquiry. *Design* as we all know is a widely-used and in many ways misunderstood construct in our profession. At times we use the term to refer to the artifacts we create. At other times, design refers to the process engaged to explore, understand, and take action as pertains to a given problematic situation. A quick review of the manner in which design has been defined will reveal a range of meanings from “an act of faith”<sup>2</sup> to “an activity which aims at the production of a plan [that] when implemented is intended to produce a situation with desired characteristics, without unforeseen and undesired side or after effects.”<sup>3</sup>

In each case, design is viewed from a different perspective. *Design as artifact* centers on two interrelated elements. First, design is referenced as the

historical record of what is being produced: What were the aesthetic canons, social circumstances, and/or technological systems that governed the production of the artifact? Second, the design is examined to determine its conformity with theoretical prescriptions of what constitutes ‘good design’. *Design as process*, on the other hand, is concerned with observing how and what the designer has done to create the artifact. The focus is on what tasks were performed and how these tasks were carried out. At the core of this perspective is design thinking or the cognitive processes the designer utilizes in exploring, understanding, and making the artifact. To further complicate our use of the term, design has also been associated with many other constructs, concepts, and ideas. The following list gives several examples:

*design literacy*: consciousness of configuration, composition, meaning, value, and purpose;

*design activity*: production of adaptations and resolution of needs;

*design education*: transmission of the body of ideas, information, and techniques which constitute the understood state of knowledge and skill;

*design history*: the study of design phenomena of the past;

*design science*: the body of knowledge that is significant for understanding the phenomena of design activity;

*design research*: the systematic inquiry into design phenomena in order to produce new knowledge or skill.

*Inquiry*, in the larger intellectual community of the sciences, social sciences, philosophy, and history, how-

ever, is the mechanism for creating and achieving new knowledge and skills. Inquiry is the renewal device of the disciplines. At the core of the process of inquiry is the concept of 'objectivity'. In *That Noble Dream*, Paul Novick reviewed the characteristics of objectivity.<sup>4</sup> His perspective provides an excellent framework for understanding classical objectivity, and more importantly, the concept of inquiry. Objectivity includes a "commitment to the reality of phenomenon and the observation of truth; a sharp separation between knower and known, between fact and value, and above all between truth and fiction." For hundreds of years, this definition of objectivity comprised a working model for inquiry.

In his book of 1970 entitled *The Structure of Scientific Revolution*, Thomas Kuhn changed forever how we understand the process of inquiry.<sup>5</sup> He challenged the notion of scientific advance as a linear development that incrementally approaches 'objectivity' or 'truth' through the application of the scientific method based on experimentation, observation, and discovery. He instead posited objectivity as a series of paradigms, each governed by distinct assumptions, rules, and methods for conducting the search. This way of looking at objectivity undermined the neutrality of the scientific method and suggested that the rules were historically contingent. Principles and concepts, rather than being empirically discovered and validated for all times and conditions, were seen to be rooted in assumptions, language, and the activities and methods of the particular community conducting the inquiry.

This paradigm shift problematized our understanding of the concepts of skill and knowledge in general and, more specifically, our concept of what constitutes the bodies of knowledge and skill in architecture. The relationship between design and inquiry took on

new meaning. This juxtaposition then raised a number of interesting questions. What are the limits of the analogy between the two constructs, design and inquiry? If the understanding of specific knowledge and skill is based on a conversation within a given community, then what is the status of the products—artifacts—of that conversation once they are removed from the context of that specific community? Finally, what is required of the professional who must bridge the gap between the theoretical or intellectual community with its particular skills and knowledge and the practical community of architects engaged in making buildings.

As a start, if we accept design as a search for a resolution to a problematic situation defined by a set of understood parameters and constraints, it should be apparent that some community—users, owners, architects, bankers, etc.—must agree on the boundaries of the search. By its very nature, this is what Kuhn would describe as a 'paradigm', a paradigm embedded with assumptions, rules, and methods held by a given community of participants. Inquiry, as noted above, is also a search, a search for objective understanding of a condition. In Kuhn's terms, this condition is dynamic, implying that the paradigm is also conditional and ever-changing as the process of searching explores the assumptions, rules, and methods that bound the present circumstances. It is this dynamic context that links design and inquiry. Design as a process is the tool of exploration, the *method*. Design as an artifact is the physical *manifestation* of the understanding of the assumptions and the rules. Inquiry is the specific *approach* to the search, or, the catalyst for establishing action and reflection in order to produce both an understanding of design as process and design as artifact. In one sense, the terms can be interchangeable if searching is grounded in action and reflection.



One can speak of design as inquiry or inquiry as design. Another way of illustrating this relationship is to posit that *the act of designing is inquiry, or the result of inquiring is design*. The operative principle here is *understanding or learning through action and reflection*.

If design/inquiry could remain an individual action and process of reflection in which one engages oneself, then little or no attention would be required to determine the understanding of the specific knowledge and skill as referenced by the community-wide conversation. If the community is one person, then the assumptions, rules, and methods are fully understood. As soon as the design and/or inquiry process becomes a collaborative effort among multiple participants, the nature of the reflection and action process changes dramatically. If any form of objectivity—agreed upon understanding—is to be achieved, then the process must provide for educating the participants about the assumptions, rules, and methods that guide the action and reflection process. A typical example is the client understanding of the spatial configuration and the implications of a resolution proposed by the designer. Is there a shared knowledge and skill base within the defined community, or does the client have one understanding and the designer another?

A solution to this dilemma would be obvious if there were a single community of concerned participants. But that is generally not the case. There are usually several overlapping communities. First, there is the client group composed in most cases of users, owners, bankers, regulators, and maintainers, each with their own set of assumptions, rules, and methods. Couple this with the professional service team of planners, architects, engineers, landscape architects, interior architects, contractors, special consultants, and the assumption, rules, and methods domain is

expanded significantly. There is also the project environment, which includes people from the neighborhood, special interest groups, and government officials representing multiple agencies with varying degrees of control over the outcomes. Finally, there are groups of participants at least one level removed from the immediate concern of the specific project, but focused on the overriding goals of the professions, that is, researchers, publishers, and critics. When one now speaks of an understanding of knowledge and skill as a conversation within a community, the notion of 'understanding' has become increasingly complex. Questions of the identity of the community, of how one educates or learns, and of what constitutes understanding become central to both the processes of designing and of inquiring.

There is no global answer to these questions, however, it should be apparent whether one is concerned about the individual conversation, a community of one, or a collaborative conversation of a community of numerous participants, the action and reflection process must be transparent and accessible by all who are considered participants. The degree to which the assumptions, rules, and methods are understood within the conversation of the community will determine the degree to which the knowledge and skills appear to be warranted and grounded, and, more importantly, a collective understanding of the resulting artifact will be established.

If one assumes the role of a professional—that is, providing services to the public that are based on the possession of specialized knowledge and skill—then one's actions are central to bridging the gap between the theoretical and practical communities. This, however, is much easier said than done. Much of the difficulty results from the lack of sufficient overlap of conversations among communities, overlap grounded in a common approach to guide theory and prac-

tice. Theory, historically, has been seen as the domain of the academic community, and practice as the domain of the profession. There was a time when the overlap of these two communities was greater than it is today. Most architects who were a part of the academic community were also actively practicing professionals weaving their process of inquiry into both their teaching and their research, as well as their professional design activity.

Today, the membership of the community has changed substantially, increasing the complexity of the community conversation. In the academy, not all of the members are architects, let alone designers. In fact, over the past ten years, the number of architects in schools of architecture represents a smaller percentage of the total faculty than in previous decades. In their place, new disciplines have come to be represented, such as specialists in human factors and computers, economists and attorneys, managers and ecologists, engineers and planners, just to identify a few. This same change has taken place in the profession, but not to the same degree. We now have not only the traditional models of architectural practice, but also new forms of practice being created at a significant rate.<sup>6</sup>

Because of the increasing separation of the two communities—the academy and the profession—it has become significantly more difficult to achieve excellence in both. The increased complexity of architecture practice demands more of each individual's attention, leaving little or no time for active teaching, let alone scholarly inquiry. The same is true for the academy. The demands for tenure and promotion require almost undivided attention to scholarship, leaving little or no time for active practice. It does not have to be this way, however, and central to the resolution of this dilemma is the relationship between design and inquiry.

In the traditional model, the academic is the active constructor of knowledge and skill, and the practitioner is the passive recipient. This model, however, is too simple. If the outcomes of academic inquiry—the books, monographs, articles, and proposals for design artifacts—are not truths but provisional and tentative arguments in an ongoing dialogue within a community of scholars, then what value do these outcomes have for the practitioner? If the outcomes of design practice—the buildings, the landscapes, the master plans—are again not seen as absolute resolutions to problematic situations but informed choices from a number of potential alternatives generated by design action and reflection, then the link between academic inquiry and design practice occurs where there is overlapping of the conversations of the two communities. The process through which provisional and tentative arguments are posited and then inform the conversation within a conjoined community becomes *design as inquiry* or *inquiry as design*.

In summary, academic scholars create outcomes for each other in the form of ongoing discussions of the state of knowledge and skill in the discipline of architecture in order to establish a collective understanding of the assumptions, rules, and methods that bound their community at a given point in time. The avenues for this discussion have been well institutionalized and only face difficulty when specialization creates fragmentation into sub-disciplinary communities. The more serious problem for the community of academic scholars is developing an avenue for translating and communicating this knowledge and skill across communities to practitioners.

The same is not true for the practitioners. They have not developed a form of exchange for sharing their knowledge and skill other than through their built



work and the critical review and publication of this work. There are several reasons for this, but two are major deterrents to a collective dialogue among the practitioner community. First, design artifacts are seen as proprietary objects created by individual action and reflection: trade secrets. Second, the process that creates these artifacts is largely invisible to anyone except those who are direct participants in the process. In many cases, to fully understand the process, the participants must possess specialized knowledge and skill to appreciate the full implications: the architect-client relationship is a good example.

In conclusion, it should be apparent that the relationship between design and inquiry is rooted in the concept of a community of conversation based on shared understanding of the assumptions, rules, and methods of action and reflection. Establishing overlapping conversations between the academic and professional communities can open up the opportunity to utilize *design as inquiry* as the mechanism to guide our future efforts toward fostering a collective understanding of the structure of theory and practice, generating a collaborative agenda for renewing our body of knowledge and skill, and increasing the credibility of our professional contributions in the resolution of the problematic of making the built environment. Sharing assumptions, rules, and methods can be the first step toward creating this overlap of conversations between the variety of communities that participate in this task.

C. West Churchman noted in his book *The Design of Inquiring Systems* that "inquiry is the creation of knowledge or understanding; it is the reaching out of a human being beyond himself to a perception of what he may be or could be, or what the world could be or ought to be."<sup>7</sup> The challenge is clear; the means of meeting the challenge is not.

The concept of overlapping communities of conversation structured around design as inquiry is a first step in meeting the challenge.

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3. Horst Rittel, *On the Planning Crisis: Systems analysis of the First and Second Generation* (Berkeley: Institute of Urban and Regional Development, 1972).
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5. Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970).
6. Robert Gutman, *Architectural Practice: A Critical View* (New York: Princeton Architectural Press, 1988); Dana Cuff, *Architecture: The Story of Practice* (Cambridge: The MIT Press, 1990).
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# Gifts of Impurities

*Sigrid Miller Pollin, AIA*

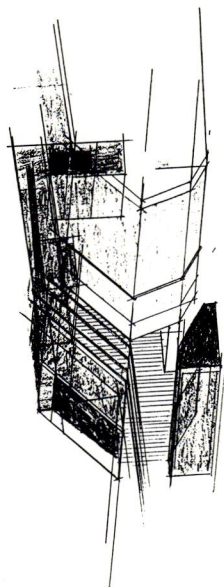
There is a curious moment in the design process when the rational flow of information is interrupted. This moment is like a grain of sand making its way into an oyster. The system of the oyster continues to function while a pearl develops inside. When the shell is opened everyone forgets about the oyster and is taken by the qualities of the pearl. It is interesting to muse about this phenomenon as a form of design inquiry about architectural space.

Unexpected, idiosyncratic ideas occur regardless of conceptual 'rules' established for the design development of an individual building or the more general tenets of an historical period. As Spiro Kostof said, "...in any case an architectural paradigm is for the designer only one of several diverse factors

that condition the work at hand. Some of the most memorable buildings are gifts of impurities...."<sup>1</sup>

Perhaps the fact that we are now working in the utter absence of any clear consensus in theory makes this moment even more appealing. Or is it that we often remember spaces that are characterized by independence from their particular historic context? Needless to say, there are many instances in which we opt to accept space as a familiar entity—a field of every day experience. But occasionally the floodgate of possibilities opens and recharges the way we conceive of space as a sensual aspect of our art.

Perhaps if we could define the overarching factor that characterizes how we program contemporary space,

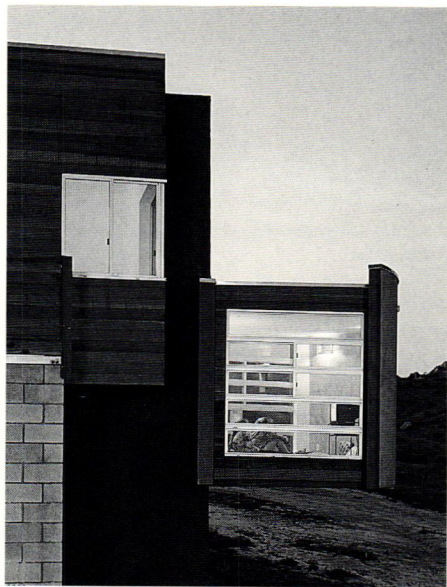


"Floating Room," Lippit Residence. Miller Pollin AIA. Sketch, Sigrid Miller Pollin, AIA. Photo, Tom Bonner.



in one word, it would be economics. Generally we are asked to program plan sizes of spaces because square footage equals capital investment. As an act of resistance to this factor, uniqueness and quality of space as counterpoint to repetition and quantity of space is increasingly relevant. Or to broaden the meaning of contemporary to include the classical period of high modernism, space in the high modern period was idealized as 'pure space'. Theoretical goals were perhaps unattainable but nevertheless focused on space as an intellectually provocative phenomenon. I mention pure space and a sense of a purer theory in modernism as a counterpoint to the more autobiographical approaches I present here. Interest in impurity of design process is not meant to devalue the purity of coherent theoretical inquiry. No doubt the 'pure space' of high modernism is a spellbinding oxymoron.

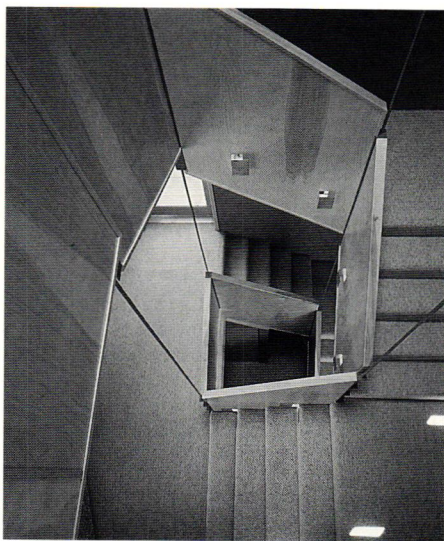
As Clement Greenberg said forty years ago, in all the arts it is only the sculptor who can approach the expression of pure space. "It is its physical independence, above all, that contributes to the new sculpture's status as the representative visual art of modernism. A work of sculpture, unlike a building, does not have to carry more than its own weight, nor does it have to be on something else, like a picture; it exists for and by itself literally as well as conceptually. And in this self-sufficiency of sculpture, wherein every conceivable as well as perceptible element belongs together to the work of art, the positivist aspect of modernist 'aesthetic' finds itself fully realized. It is for a self-sufficiency like sculpture's alone that both painting and architecture now strive."<sup>2</sup> The thrust during the height of the modern period was toward purity of space, toward defining space minimally. There was an emphasis on "the continuity and neutrality of space that light alone inflects without regard for the laws of



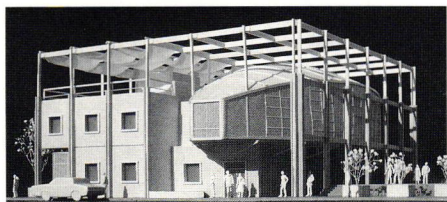
Miller Pollin Residence. Miller Pollin, AIA. Photo, Tom Bonner.

gravity....buildings formed of lines alone seem woven into the air."<sup>3</sup>

If the sculptor is at times the envy of the architect for making pure space, the architect is the envy of the sculptor for possessing the possibilities of molding space as an artistic medium—like



Private Residence. Miller Pollin AIA. Photo, Tom Bonner.



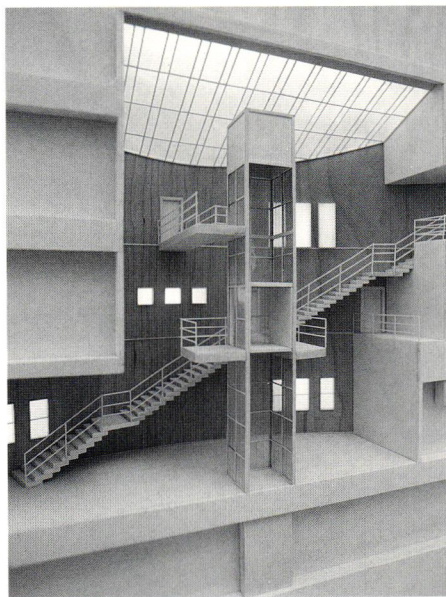
Riverside Chamber of Commerce Building. Miller Pollin AIA.

clay or bronze—to form a defined sensory habitable field. The molding or sculpting or playing with space seems to be the easiest to achieve when it is unfettered by a ‘logical system’ of space making. When the space itself is an inquiry rather than a methodical answer: It forms out of ‘what if’ rather than ‘this therefore that’.

For example, in designing a house primarily motivated by exterior views, what if I make one space with primarily interior views—a space floating within a space? And what if this space floated above the kitchen—a room that is a giant cabinet? Of course, if the project is real the client needs to be a part of the inquiry. And when broached with the idea the client says, “what if I had a space that was internally focused? I could use it as a quiet reading place.” And the structural engineer says, “what if we cantilever the leading edge of the space so that it appears to float?” The initial inquiry becomes a whole series of inquiries among all the people involved in the process. Or in a different residence, what if there is one space that hovers over the landscape—a cantilevered space? What would it be like to have a small space that’s completely unprogrammed? What if it is a tea room suspended over a meadow? What would the space feel like? Or what if a three story stair becomes a diminishing vertical perspective? What if there is one very vertical space in a place where the eye is generally directed horizontally? Or in a building based on a very regular orthogonal structural grid, what if a curved chamber is embedded within the

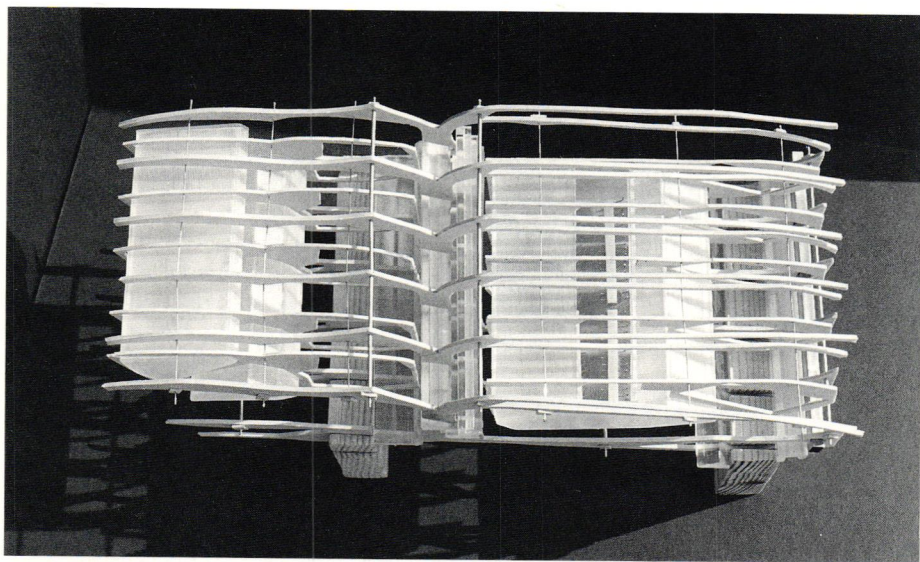
grid? Or in a turn of the century building primarily valued for its exterior facades, what if the interior heart of the building becomes the critical counterpoint to the facade?

The interesting point about the moment when there is a leap from the designer’s conceptual synthesis of data on climate, program, and all quantifiable information is that at first blush it can seem arbitrary, impulsive. Sometimes it is. But upon reflection it can also emerge out of plumbing the depths of personal memories, experience, and interpretation. It evolves out of conflict between poetic and practical impulses. The impulse to make something in our architecture that is identified with a certain place or time or is simply autobiographical is an emotional struggle to be part of the beauty and conflict of differentiation. To locate this part of the design process in broader terms, the process correlates closely with our experience of straddling an abyss between globalization of the production of architecture (architecture responding to mass



Model, Loring Building Renovation, Riverside. Miller Pollin AIA. Photo, Ray Q. Galano.

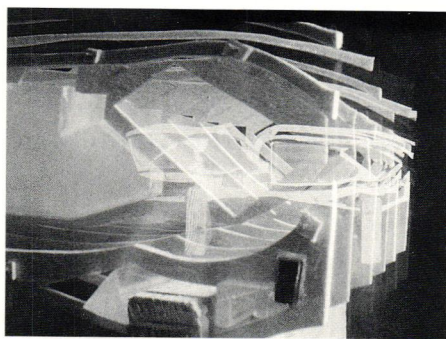




media images, high technology, and capital production), on the one hand, and, on the other, a longing for regional, local, and individual identity.

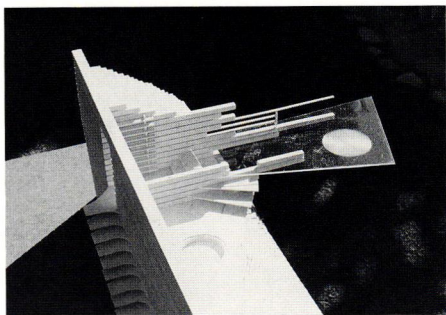
Design as inquiry—as a way of asking ‘what if’ is one of the the most engaging aspects of our work both in practice and in the university design studio. The students who explore the promise of curious moments in the development of a design—the ones who watch the pearl grow out of a grain of sand—get unpredictable results. Their success or failure is rarely tested by reality in academia. However, they avail themselves of the opportunity to evolve entire projects primed by similar kinds of curious, idiosyncratic moments in the design process.

The exploration by student Natalya Karavay in the studio involved the relationship between architectural language and the formation of space. The program was for a newspaper plant and social gathering place in downtown Los Angeles. She essentially abandoned the program in order to focus on the spatial inquiry. She was fascinated by the production of the printed word and wanted to bring her own interpretation to a space that housed printing presses. She



Student project by Natalya Karavay, Cal Poly Pomona.

made an anamorphic armature by merging two Gothic letters. She studied the spatial characteristics of font types. Then she leaped into a heady roller-coasting process projecting three-dimensional space beyond the two-dimensional graphic. The armature she chose has a variety of sizes and proportions of spaces—loosely interpreted as large production areas and smaller areas for offices, proofreading, etc. The armature has the structural clarity of many more regularly shaped systems. It holds an array of contained spaces. The jury wondered if this could be made more real. But that is beside the point. It is real in its spatial exploration.



Student Project by Ken Murai, Cal Poly Pomona.

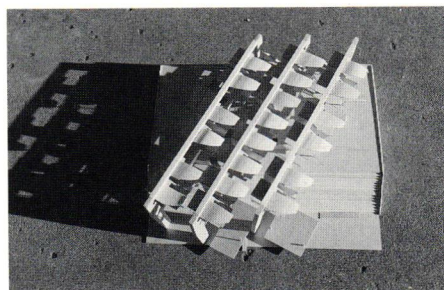
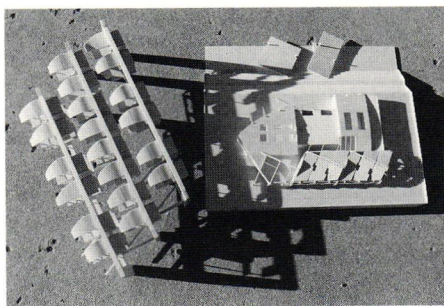
For student Ken Murai, the exercise was to design a cabinet, a light fixture, and a room all based on the same tectonic language. In looking at drawers and cabinets, he focused on appearance and mechanics of sliding horizontal elements like a cabinet drawer. Illustrated here is the room portion of the project. The room itself is a series of horizontal pieces that slide out from the hillside while the stairs on the retaining wall side of the site retract horizontally into the wall for privacy.

The program for designer Ed Lucero called for a beachside hotel in Venice, California. He recognized the conventional programmatic breakdown of a hotel into two basic parts. Part one is the common area including lobby, restaurant, banquet rooms, etc. Part two is the hotel room portion. Instead of resisting the two-part function, he exaggerated it. He formed one building type as a series of cell shells atop a second building composed of a series of larger enclosed blocks of space. He also exaggerated the individual rooms separating one from the other. Large overhead beams serve as the collective form holding the cells. Each space, each shell has the ability to open and breathe on four sides—emphasizing the possibilities for natural ventilation on the Venice coast.

Translation of two-dimensional graphics into three-dimensional space, exploring sliding joints and horizontal structure, exaggerating the conven-

tional—each of these designs evolved out of a moment in the process when the balloon that held the logic of all the information that the student had researched burst and caused all the information to flow out in an unexpected order.

John Ruskin described a comparable phenomenon in art: “The moment when a man [*sic*] can really do his work, he becomes speechless about it. All words become idle—all theories.”<sup>4</sup> The whole notion of inquiring comes before and after this silent moment. Thought and imagination, analysis and intuition are also balanced around the moment. But more importantly as Ruskin points out there is a strange relationship between the processes of inquiry/art-making and the experience of questioning whether your answers are right or wrong. “And now returning to the broader question of what these arts and labours of life have to teach us of its mystery, this is the first of their lessons—that the more beautiful the art, the more it is essentially the work of



Student Project by Ed Lucero, Cal Poly Pomona.



people who feel themselves wrong, who are striving for the fulfillment of a law, the grasp of a loveliness, which they have not attained, the more they strive for it. And yet, in still deeper sense, it is the work of people who know also that they are right. The very sense of inevitable error from their purpose marks the perfectness of that purpose, and the continued sense of failure arises from the continued opening of the eyes more clearly...."<sup>5</sup> Design as inquiry is a way of opening the eyes more clearly to see both the pure and the impure, the oyster and the pearl.

## NOTES

1. Spiro Kostof, *A History of Architecture Settings and Rituals* (New York: Oxford University Press, 1985), 343.

2. Clement Greenberg, *Art and Culture Critical Essays* (Boston: Beacon Press, 1961), 145.

3. *Ibid.*, 144.

4. John Ruskin, *Sesame and Lilies* (Boston: Dana Estes & Co. Press), 122.

5. *Ibid.*, 127.

# Mind and the World: The Interplay of Theory and Practice (A Theory)

Murray Silverstein, AIA

*Not living for each other's sake,  
Mind and the world will rarely  
rime....*

Howard Nemerov<sup>1</sup>

My experience with the relationship between theory and practice in architecture breaks into three periods: First, just out of school (UC Berkeley, 1967), I was infatuated with theory and joined Chris Alexander and Sara Ishikawa to start the Center for Environmental Structure, known as CES, in Berkeley. Over the next seven years at CES we taught, researched, and wrote about architecture with many collaborators, but did very little building. During this period, we hatched the basic *pattern language* theory and published papers and books about it.<sup>2</sup> Theory ruled.

During a second period, in the mid-1970s, I started a practice with Max Jacobson, a CES colleague, and we collaborated on a stream of mostly residential building projects. We both continued to teach and write, combining theoretical work with practice. During this time, practice seemed a kind of lab within which theory could be tested and refined. In this sense theory still ruled, but practice was its necessary proving ground.

Over the last decade, as our practice has grown, we have entered a third period in which theory seems to have taken on a new role. We are still engaged in theory building—indeed Max and I and our third partner, Barbara Winslow, recently published a book advancing a theoretical framework for

our work.<sup>3</sup> But a shift has occurred: Practice with its *ad hoc* nature now dominates the equation. It is no longer our goal as practitioners to prove or disprove theory; indeed, practice seems to generate theory instead of the other way around. The buildings and projects that interest me now are more like open, probing questions than proofs. They use theory; they lead to theory; but existing in and of the world, they are in some fundamental way beyond theory's ken.

In the following notes, I explore these periods in my own work life with the hope of understanding a bit more about the nature of the interplay of theory and practice.

## THEORY AS PRELUDE TO PRACTICE

The work on *pattern language* theory began in the Department of Architecture at the University of California, Berkeley in the mid-1960s, in the context of a year-long seminar directed by Alexander. Upon completion of the seminar, a group of us formed CES as an independent nonprofit institute, with the intention of continuing this work. Little attempt was made to bridge the gulf between theoretical work and conventional forms of practice. Indeed, few of us had ever spent much time in an architecture office—which at that point seemed a kind of virtue. We did try our hand at a few 'real world' projects, and conducted experiments in the application of our ideas, but it was all in the service of theory. We were architects



bent on creating from scratch a strong and convincing theoretical framework, a framework that would guide practice—not only our own, but the practice of others. Our first work in 1968 was a self-published monograph, *A Pattern Language Which Generates Multi-Service Centers*.<sup>4</sup> This book set forth an architectural grammar for a new type of building—a combination community center and social service agency—and presented eight case studies in which hypothetical projects were designed using the grammar in a methodical way. One was actually built.

The emergent theory underlying this work went roughly as follows: We had come to understand that vernacular environments, those preindustrial towns and villages that seem so well adapted, that contain such an exquisite balance of order and variety, were made by people who possessed shared *languages of place*. Throughout the world, these languages, which had evolved over centuries, and were the very glue of communal life, had been (and were being) destroyed in the historical press of industrialization. Our approach, therefore, was *descriptive*. We wished to reveal such languages—to show that they were made of recurring spatial *patterns*, that these patterns operated at all levels from the distribution of towns to the shape of a window sill, and that the patterns were linked in characteristic ways according to grammatical rules. But our deeper intention was *prescriptive*. Convinced that such languages were critical to the creation of well-formed environments, we wished to develop one for our time. Using words and diagrams and photographs, we sought to create a pattern language that addressed our own conditions, the contents of which would be so compelling that anyone, reading it now, could *use* it to re-imagine and then shape the built environment at any scale. In effect, we hoped to lay the groundwork for the

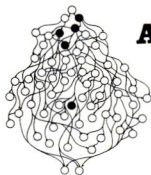
growth of a new/old vernacular architecture, grounded in traditional principles of place-making, yet appropriate to a dynamic, post-industrial society. And from this theoretical work, we supposed, new forms of practice (forms encouraging citizen participation and user design) would spring forth.

As even the title of our first monograph indicates, theory was viewed as the generator of practice. Starting with the notion that pattern languages are the seeds of architectural form, we created one such language for a particular building type, then turned it loose, so to speak, in the arena of practice.

This work was seminal. One sees in it the beginnings of the theory that Alexander and his various co-workers have since gone on to develop in a distinguished series of books and projects. One also sees in this early work some basic notions about the very nature of theory and its relationship to practice, and it is these notions that I wish to highlight.

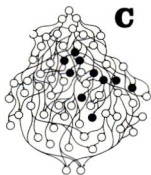
- First, there is the effort to establish the *priority* of theory over practice. Pattern language theory, like other theories imagined in isolation from practice, is primarily a work of the mind. It is a construction of the mind born of the drive to bring intellectual control and order to the world of practice. The *pattern language* acts to generate the building—not designers, and not a population of users. The theoretician's hope and fantasy: Buildings will be built in the world with thought—deliberate, rational, conscious thought—as the source, the prior agent, of control.

- Second, the emphasis on the priority of theory contains the notion that conventional practice itself was already controlled by a precursor theory, in our case the theory of Modernism. In the 1960s it seemed urgently necessary to generate new theory because Modernist theory, (and hence its form of practice) was understood to be fatally flawed. We



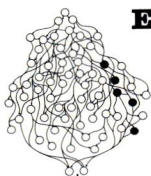
**A**

- 3. Size Based on Population
- 4. Community Territory
- 7. Entrance Location
- 11. Arena Enclosure
- 43. Waiting Diversions



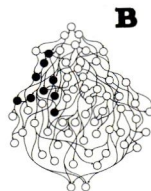
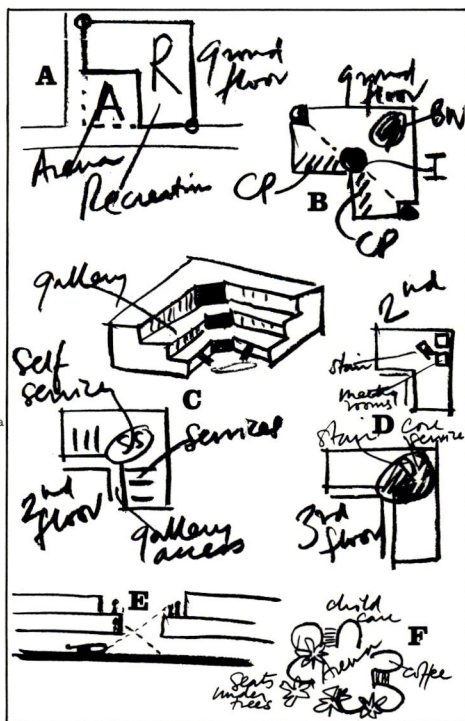
**C**

- 13. All Services off Arena
- 14. Free Waiting
- 15. Overview of Services
- 21. Self-Service
- 22. Pedestrian Density
- 25. Building Stepped Back
- 26. Vertical Circulation
- 31. Short Corridors
- 39. Arena Diameter
- 51. Stair Seats



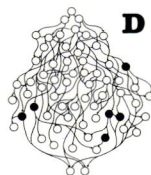
**E**

- 18. Windows Overlooking Life
- 26. Vertical Circulation in Services
- 33. Service Layout
- 40. Office Flexibility
- 56. Informal Reception



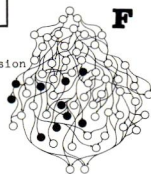
**B**

- 9. Arena Thoroughfare
- 10. Open to Street
- 16. Necklace
- 17. Community Projects
- 23. Entrance Shape
- 24. Subcommittee Watchdogs
- 28. The Intake Process
- 29. Outdoor Seats
- 35. Information



**D**

- 19. Core Service
- 41. Town Meeting
- 45. Block Worker Layout
- 47. Meeting Rooms
- 49. Staff Lounge
- 59. Square Seminar Rooms



**F**

- 20. Activity Pockets
- 27. Self-Service Progression
- 29. Outdoor Seats
- 35. Child-Care Position
- 38. Community Wall
- 42. Sleeping OK
- 48. Barbershop Politics
- 53. Form-Filling Tables
- 54. Accessible Bathrooms
- 57. Child-Care Contents

Excerpt from A Pattern Language Which Generates Multi-Service Centers.



sought to establish new first principles, *principles which corrected the imagined errors of the old theory*, and upon which new forms of practice could be defined. Architectural theory, in this sense, is analogous to an idealized scientific model. Theoreticians advance hypotheses and formulate theory in response to the errors and limitations of old hypotheses and theories; practitioners read the journals, view prototype buildings (experiments), select the most compelling ones, and attempt to replicate them in their own work.

• Theory pursued in this way has a vital psychological component. It draws energy from our desire to overcome precursors and establish ourselves as a new *source* of order and creation—the inevitable struggle between generations. In Berkeley, in 1970, we were new kids on the block, bent on knocking-off the old guard, the stalwarts and revisionists of Modernism. And when you kill the father figure by supplanting theory, you establish yourself, psychologically at least, as a primordial creator. You feel as though you have become the originator of your own practice. This seems to be one of those necessary illusions, like Woody Allen's eggs, which work to keep the creative juices flowing. Although you know rationally quite well that you're not the first thinker on earth—that you are indebted to intellectual forebears—the illusion of originality *feels* useful: It helps to establish the imaginative space required for creative theoretical work. (A similar notion is presented in Harold Bloom's wonderful book, *The Anxiety of Influence*, regarding the history of poetry. Bloom cites Kierkegaard who writes of the artist's effort to reach, through his work, a kind of 'ground zero', whereupon he finds that he has given birth to his own father.)<sup>5</sup> Lou Kahn, a strong father figure with a proclivity for ground zero theory, professed that he loved English history, and owned many volumes of it,

but each time he sat down to read he never got beyond Volume One, or even *paragraph* one of Volume One, because his real purpose, he said, was to read "Volume Zero,...which has not yet been written."<sup>6</sup>

I am not highlighting these three notions as *problems* of theoretical work (our own at CES, or in general); I am only pointing out that theory developed as a *prelude* to practice possesses these characteristics (inevitably, I suspect): It postulates rational, conscious thought as the controlling agent over practice; it seeks to displace strong precursor theories; and it tries to accomplish this in a climate of contrived originality. That these aims are elusive and can never be completely achieved does not mean they are necessarily flawed or should not be attempted. Practice, as I've suggested, needs theory.

#### PRACTICE AS THEORY'S PROVING GROUND

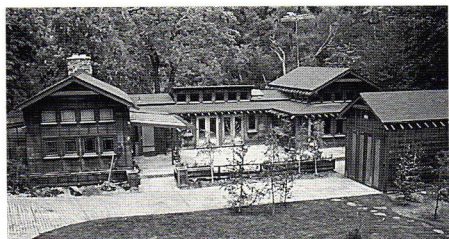
When Max and I began our office with a few projects in 1974, like most beginners, I was short on practical know-how. I felt naive encountering areas of practice that, as a theoretician, I had never seriously addressed. These included certain 'hard' facts, like the structuring nature of budget and fees, the flux of code and regulation, and the necessity for well-organized working drawings. But there were some 'softer' ones as well, which theory had addressed but which seemed like different animals when encountered in actual projects. One's sense of spatial proportion and the way it guides an emerging plan; the relative feel of enclosure and flow in a built thing; the surprising *look* of certain materials: These are examples, to my mind, of the seemingly softer but no less real facts.

I was a beginner, clearly, and practice had much to teach. But in those

initial years, the teachings of practice seemed to occur within the framework established by theory. That is, where pattern language theory came up short in the face of the recalcitrant facts of practice (hard, soft, or in between) our tendency was to mentally amend and extend it. That the theory was incomplete was not news; we had always billed it that way. We had analogized that, like natural, spoken languages, pattern languages were always in progress, always evolving in the hands of their various users. Our theory (in theory) could grow, new patterns could be developed, new strategies of practice proposed.

By focusing on the specific modifications of one theory, we maintained the sense of theory in general (and behind theory, intellect) as the controlling force in the equation. Practice was the testing ground—the place where theory could be embodied and elaborated; but theory continued to constitute the matrix within which the lessons of practice were experienced.

These thoughts were played out in two early projects, both in Northern California—the Kuperman Residence in Moraga (our first house), and Mudd's Restaurant in San Ramon. In both projects we followed, more or less explicitly, the process we and our co-authors had described in our books at CES. A list, or language, of patterns was debated, selected, and critical patterns highlighted; the basic framework of the scheme grew from participatory design meetings on the site; models



Kuperman Residence, Moraga. JSW Architects.



Mudd's Restaurant, San Ramon. JSW Architects.

were built and rebuilt with user groups; many details were developed during construction, with the help of builders and users. Throughout the process, a vernacular *attitude* toward plan and form was cultivated, and modernist reductions and rigidities were eschewed. As far as site, budget, and program would allow, our buildings *rambled*, shaping, we hoped, “Courtyards Which Live,” “Entrance Transitions,” and “Light on Two Sides of Every Room.”<sup>7</sup>

In these and other projects from the same period, I can now detect three ways in which practice informed theory.

- First, and perhaps easiest to see, were the ways in which theory proved to be valid. It was exciting to have projects succeed in precisely the ways that theory predicted: South-facing courtyards with tangent circulation *did* turn out to be lively places; people who had participated in the design *did* come to feel powerfully connected to the places they had made; and so on.

- Second, and equally straightforward, were the ways that our experience with projects led us to amend and develop theory. Some patterns and procedures were revised and strengthened, some abandoned; some areas of practice revealed gaps where theory was not much help. In the area of circulation, for example, we were constantly tinkering with our plans, trying to find more graceful *paths* for people and their cars than the patterns seemed able to deliver.



• The third way in which practice informed theory we found less susceptible to tinkering. As anyone who brings *any* ideas (let alone a weighty theory) to the world of practice knows, one is confronted with a thicket of 'real world' conditions—building codes and permit requirements, banking procedures, contract conventions, general inertia—all of which regulate what and how we are able to design. When these conditions conflict with the requirements of theory, as they inevitably must, a fork in the road appears. One either copes with the conditions and goes forward with practice, or returns to theory in an attempt to resolve the conflict there.

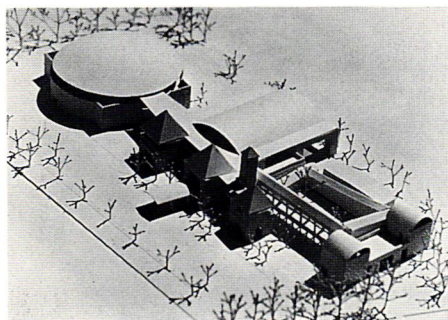
For example, our theoretical work included an emphasis on *piecemeal organic growth*, allowing for gradual adaptation within a project by users making individual choices from a shared language of form.<sup>8</sup> We were hired to design a low-income housing project by a community-based nonprofit group in part because they were intrigued by this notion of piecemeal growth. The site contained several decent existing units, already occupied by members of the future tenant population. Here seemed a perfect occasion to experiment with our principles of organic growth and user design. We proposed keeping the existing units and 'growing' the new project around them, building in several phases of shared-pattern-language, design-as-you-go, construction. It soon became clear, however, that the agencies providing funds would require new construction, built all at once, with no provisions for the funky variety that incremental growth and user participation can generate. We fought the good fight, but the bottom line was clear: "These are the terms of the loan; take it or leave it." Our clients, without question, decided to take it, and so we went forward, coping with this condition, trying to squeeze some version of our ideas into the required format.

This kind of experience is, of course, commonplace in practice. But consider its relation to theory. A determined theorist, (one, perhaps, with a teaching position) might have referred the job elsewhere, and gone on to enlarge the domain of theory, defining a rational financing process that would meet conventional objections, allow for piecemeal growth, and become a model for future experiments in practice. In this way, in the face of conflict between theory and the world, the archtheoretician fashions wider domains of theory. Of course, the choice is not so clear cut. A theorist/practitioner can *both* take the job, accept the conditions, *and* enlarge the theory, defining new conditions for future work. This kind of fork in the road is real, however, and, over time, one either casts one's lot with practice and builds in the world as it is, or returns to theory to expand its conjectural domain.

These two paths encompass symmetrical dangers. When theory is con-



New Residence, Woodside. JSW Architects.



Recreation Center for Disabled, Walnut Creek.  
JSW/HTA Architects.

tinuously expanded to cope with the conflicts of the real world, it runs the risk of becoming ever more utopian and isolated, its projects hot-house creations whose success is contingent upon a whole fabric of never-to-be conditions in the world. On the other hand, where practice is continuously beaten-down and forced to compromise by the exigencies of program and circumstance, it loses its theoretical moorings, and becomes so enmeshed with the 'world as it is', that it loses vision and intellectual content, becoming a mindless response to existing conditions. These are the dangers we've been trying to steer a course between while struggling with the contingent happenings of a developing practice: Over time our work seems less theoretical—less, that is, the *product* of theory—but still needful of the clarity and vision that theory has to offer.

## PRACTICE GENERATES THEORY

When Max, Barbara and I wrote *The Good House* in 1990, we organized it in two sections—theory and practice. In Section One we introduced and developed a theoretical framework, 'the theory of contrast'; in Section Two we presented projects that illustrated various aspects of the theory. In his foreword to the book, Joe Esherick wrote that "while the book moves from

theory to practice, the authors worked the other way around: practicing first, then developing theory. Indeed the book could be read backwards, the last chapters on practice first, then the first chapters on theory."<sup>9</sup>

This comment rings true. The theory of the book was *derived* from practice. We had been asked by Taunton Press to write a book about designing houses aimed at the readership of their magazine, *Fine Homebuilding*. The editor assigned to the project advised that we keep it "down to earth—not too theoretical." We tried to follow his advice, and, reviewing our experience as practitioners, asked ourselves the most practical question of all: *What worked?* We hoped to extrapolate a series of design strategies from past projects that readers could use in many different ways. We soon realized, however, that the strategies we found most important were related. They could all be seen as variations on a theme: the theme of contrast. Strong design, we theorized, grows from struggling with opposites—contrasting design elements—at all scales.

We stated in the preface that "from the overall shape of a building down to the details of trim, a good house is composed of sharply contrasting qualities, all working together. For example, to create a room that is light and expansive, also create (to some degree) its opposite, a place that is dark and enclosed. And then link the two. Likewise, to experience warmth we need the cold; to experience order we need mystery. Good design, in these terms, is the production of harmony through the orchestration of strong contrasts."<sup>10</sup>

In effect, trying to answer the practice-based question 'what works?' in a way that would be useful to others, required that we form abstract ideas *about* our practice. In this way, Joe was right—we were working from practice to theory. But theory so formed, I dis-



covered, has another dimension. It not only describes the ideas which drive past work; it also moves practice toward greater content, greater clarity, as it challenges the practitioner to *reabsorb*—more thoroughly, more elegantly—the lessons of past work. If I may generalize, practice-derived theory can become like a flashlight that helps the practitioner see deeper into his own work—its range, its motivations and potentials—and to appreciate more in the work of others. *One needs fresh theory, in short, to make on-going sense of practice.*

The ideas about contrast that we have drawn from practice could be produced or explained, no doubt, by reference to pattern language theory. But they do not require it. Indeed, such sensual qualities (which abounded in the vernacular environments that CES initially observed and described) seem best understood by means of practice—through contact with the built world—rather than by conjecture according to rules of theory. Patterns distilled from a life of practice, it turns out, are at least as interesting as those formulated in the abstract, as prelude to practice. Perhaps more than practicing what we preach, we need to learn to preach what it is that we actually practice.<sup>11</sup>

Trying to understand the interplay of theory and practice in this third phase of my work life, I note the following:

- The original notion of theory as generator of practice gives way to the experience of practice as a *source* of theory—theory that, in turn, enlivens practice.

- No one building can be advanced as the single polemical expression of theory-hatched-in-practice. Rather, such theory is illuminated in fragments of various projects; our buildings are characterized more by a variety of feelings than by theoretical victories or defeats.

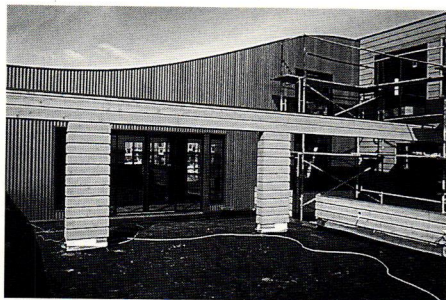
- Practice-based theory seems less bent on overcoming the errors of precursor theory, less in need of being the biggest theory on the block. And, unlike hot-house theory, it is not so full of Oedipal energy.

- When theory is formed as prelude to practice, it may never be generative in quite the way theoreticians hope and imagine it can be. Practice is too complex for that. It is too richly engaged with “the crooked timber of humanity”—this is Kant’s phrase—“from which no straight thing can be made.”

- I have come to think of practice, instead, as the arena of conflict where mind (theory) and the world (the creation of buildings) meet. It is a place in its own right, where fresh theory may be gathered, indeed *must* be gathered if work is to retain vitality. But an arena of conflict it will always remain. Mind and the world will rarely rime: not always the music we’d like to hear, but perhaps the only music there is.



Johnson Residence, Whidbey Island, Washington.  
JSW Architects.



Fox Residence, under construction, Richmond.  
JSW Architects.

I started this article with two lines from Howard Nemerov's poem "Knowledge." Here is the entire poem.

*Not living for each other's sake,  
Mind and the world will rarely  
    rime;  
The raindrops aiming at the lake  
Are right on target every time.*

## NOTES

1. *The Collected Poems of Howard Nemerov* (Chicago: The University of Chicago Press, 1977), 443.

2. The books that resulted from this period of work are Christopher Alexander's *The Timeless Way of Building*, 1979; *A Pattern Language* (Christopher Alexander, Sara Ishikawa, Murray Silverstein, with Max Jacobson, Ingrid King, Shlomo Angel), 1977; and *The Oregon Experiment* (Alexander, Silverstein, Angel, Ishikawa, Denny Abrams), 1975; all are from Oxford University Press.

3. Max Jacobson, Murray Silverstein, and Barbara Winslow, *The Good House: Contrast as a Design Tool* (Newtown, Conn.: Taunton Press, 1990).

4. Christopher Alexander, Sara Ishikawa, and Murray Silverstein, *A Pattern Language Which Generates Multi-Service Centers* (Berkeley: Center for Environmental Structure, Berkeley, 1968).

5. Harold Bloom, *The Anxiety of Influence* (Cambridge: Oxford University Press, 1975), 56, 72-3.

6. Louis Kahn, "I Love Beginnings," Proceedings of the Aspen Design Conference, 1973.

7. These are patterns—each the title of a short chapter—from *A Pattern Language*, 548-552, 561-564, and 746-751, respectively.

8. See Alexander, *The Oregon Experiment*, Chapter 3.

9. Jacobson, *The Good House*, vii.

10. *Ibid.*, viii-ix.

11. The implications of this article may be summarized by a proposal to the AIA: Establish a grant program providing 'theory sabbaticals' to worthy practitioners, awarded by local chapters, through which the recipient is required to explicate usable theory *from* his/her work. The resulting monographs would be circulated within chapters, debated in chapter newsletters, and made available nationally via abstracts. Five years of such a program, I submit, would powerfully enrich the theoretical base of our profession and thoroughly enliven its practice.



# Commercial Architecture That Works: Creating a Link Between Architectural Expression and Positioning Strategies

Barton Todd Anderson

*When developing this edition of Architecture California, the Editorial Board imagined that commercial architecture may constitute an arena in which design as inquiry is fundamental. Actively testing hypotheses regarding the variables that generate success in consumer environments, marketplace design incorporates a rare feedback loop. In that light, Barton Anderson discusses some of the problems being addressed in the design of commercial architecture.*

The struggle between logic and intuition is probably timeless. Reason and faith vie for legitimacy pitting what is known against what is felt, tangible against intangible. Those who feel their way through life believe that knowledge does not always imply understanding. Others seek light from reason, believing that error lurks in the shadows of ignorance.

There is ample room to argue the virtues and pitfalls of either position, and a moderate compromise between logic and intuition is perhaps the best course. Architecture is by necessity a strange partnership between the two—having reached an uneasy balance of utility and art, quantitative and qualitative phenomena, cost and benefit. Where other great philosophical disciplines tend toward reason alone, architecture can never fully escape the esthesia of the endeavor.

In the complicated world in which we live, intuition seems inadequate in the face of stiff competition. It is natural to seek quantifiable outcomes in an effort to reduce ambiguity and uncertainty. In the commercial arena, where scarce resources are at stake, the search for risk reduction drives the quest for prescience. What is it the consumer wants? What is our competition doing? Can we do more? The obvious answer: to survive another business day, we had better find out. Thus, for the architect specializing in commercial projects, the process of design is by definition an inquiry.

This essay briefly discusses the fundamental theory being tested by design as part of the growing efforts to quantify and employ architecturally-influenced behavior outcomes as part of a company's positioning strategy. It addresses general marketing strategy and offers a cursory exploration of competing theories of consumer psychology. Finally, it argues that competitive pressure drives the evolution of retail architecture and the resulting behavior settings that emerge and that, in the future, we will witness increased emphasis on entertainment—both as a response to current levels of prosperity and leisure time, and as a result of competitive pressure to stimulate and engage interest in routine commercial activities.

## MARKETING AND ARCHITECTURE

Late twentieth-century American culture is undeniably commercial. We live within a honed mass distribution apparatus catering to every conceivable human whim. As consumers, we have been prodded, probed, and generally studied *ad nauseam*. Whether it is a welcome development or not, it should not come as a surprise that the results of marketer-driven consumer research are used to create architectural forms consistent with a company's strategic business objectives.

Quite often marketing activities are thought of exclusively in terms of mass media campaigns or promotional sales events. In reality, if a company has been doing its job, the advertising activities to which consumers are intentionally exposed will be only a small portion of the company's total marketing effort. Architecture can be an active component of a company's 'marketing mix', and can shape consumer perceptions about a company's product or service offering.<sup>1</sup>

Contrary to the popular misconception that equates 'marketing' with sales efforts, marketing as a business function includes all activities associated with bringing a product or service to the market. As an academic discipline, marketing approaches the commercial arena with an intent to understand consumers' search for need fulfillment. In its most rudimentary form, the commercial transaction is simply the exchange of need-fulfilling goods or services for something perceived to be of equal or greater value. To the extent that marketers understand physical and psychological motivations that create need, they can provide need-fulfilling product offerings that coincide with what consumers desire. The fit between an experienced need and a need-fulfilling solution will be determined in part by the depth of the 'at-

tribute bundle' of the product or service offering.<sup>2</sup>

In addition to the normal functions associated with the built form, commercial architecture should be considered an extension of a firm's total attribute bundle. Architecture is a factor capable of reinforcing or diminishing need-fulfillment experienced by a consumer during a need search. To the extent that architecture ignores or fails to address need-fulfilling aspects of a product or service offering, it can create dissonance in the consumer's mind which may discourage purchasing, reduce consumer satisfaction, or result in negative post-purchase evaluations of purchase outcomes. To the extent that architecture augments or reinforces consumer perceptions about the need-fulfilling potential of a product or service offering, it can reinforce the purchase decision and the resulting consumption outcomes.

Given its potential for reinforcing consumer expectations, architecture must be recognized as an important component of any strategy attempting to 'position' a company relative to its competition. As our economy matures and becomes inextricably linked to other global economies, intense competition makes differentiation based on price or tangible product attributes more difficult to create or maintain. The result is an increased emphasis on product delivery and service in addition to all the attention placed on the product itself. It is becoming increasingly clear that as competition grows, the total attribute bundle is beginning to include not just tangible product attributes, but convenience and entertainment factors—usually in the form of enhanced service. However, the augmentation of product attributes can be given concrete form and expression through the careful articulation of the architecture housing commercial activities.





Niketown, Costa Mesa. Carmen Nordsten Igonda Design with Nike. Located in Triangle Square, Altoon + Porter Architects.

## MARKET POSITION

A company's market position is determined by its ability to create a clearly distinctive and desirable identity in the minds of consumers in its target segment of the market. This is not accomplished haphazardly, but is based on a specific marketing mix formulated from the results of extensive consumer research. In a market situation where other variables are equal, a competitor that provides a total shopping or consumption environment more in tune with consumers' expectations and desires will attract more customers than other competitors. In this type of situation, it is not competitively sufficient to house commercial activities in nondescript architecture.

The 'warehouse' stores we see sprouting up overnight may be sufficient for discount 'club stores' competing on price alone. However, if two competing club stores were located immediately next to each other and offered the same products, prices, and service levels, the competitor providing an environment more conducive to the needs of the consumer would be placed in a position of relative competitive advantage.

There is a continuum on which all positioning strategies may be placed that is bounded at its extremes by high-end and low-end approaches. The range

between extremes is occupied by an almost infinite variety of competitive strategies all attempting to carve out a secure and profitable niche.<sup>3</sup> At the low-end, companies compete solely on the basis of price. In our economy, examples of this type of outlet abound. They are most commonly found in 'strip malls' or in larger centers that have come to be known as 'power centers' and include such stores as the all-too-ubiquitous KMart and WalMart. At the other extreme, the high-end is occupied by companies offering extended bundles of both tangible and intangible attributes. Examples might include stores such as Tiffany's or Nike Town, where product attribute bundles clearly exceed the tangible product itself. These up-scale retailers have traditionally been reticent to associate themselves too closely with the more proletarian 'shopping malls' and have preferred instead to remain in more exclusive downtown locations. However, as fewer and fewer shoppers ventured downtown to shop, a new



Two Rodeo Drive, Beverly Hills. Kaplan McLaughlin Diaz, architects.



Fashion Island, Newport. RTKL Associates, Inc., architects of most recent renovation.

breed of 'fashion' mall—such as Two Rodeo Drive in Beverly Hills, South Coast Plaza in Irvine, and Fashion Island in Newport Beach—emerged to accommodate these up-scale retailers.

In this country, the vast majority of retail business activity occurs in organized commercial developments. Stand-alone retail architecture is becoming more difficult to find and is usually limited to specific product and service segments, such as fast food and automobile maintenance.

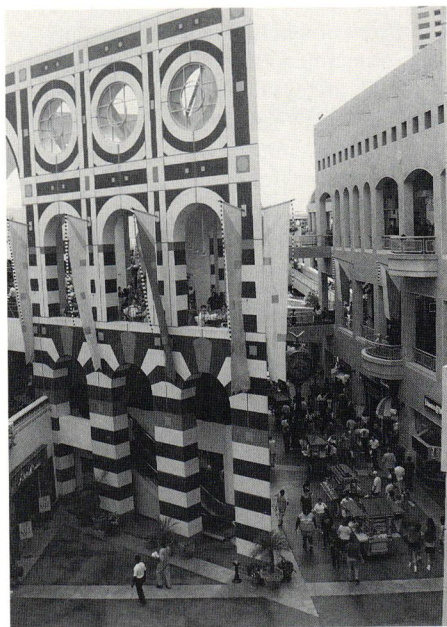
The success of commercial projects, which have brought so much attention to firms such as Altoon + Porter Architects and The Jerde Partnership, is dependent on the ability of tenants to finish-out their improvements in a manner consistent with themes developed by the project's design firm. While lease agreements tend to direct tenant design efforts in a specific direction, there is a reticence on the part of many national chains to sublimate their established identity to that of an individual project's design or to make changes to their prototype store design or signage. The result is that tenant improvements proceed haphazardly according to individual internally generated strategies, which may conflict with the overall effort of the development to attract patrons.

Centers like San Diego's Horton Plaza and MCA's City Walk, both designed by The Jerde Partnership respond

quite naturally to competitive pressures. Each creates a festive environment which is perhaps as much responsible for attracting potential shoppers as the shops themselves. The need to augment the shopping experience with entertainment attributes is clearly evident owing to the fact that most malls house nearly identical sets of retail outlets.

City Walk targets a segment of the leisure market with a tenant mix offering non-essential novelty stores, fast food outlets, restaurants, night clubs, and theaters. In general, these retailers and service providers do not cater to shoppers engaged in pre-planned purchase patterns, even though some of the retail outlets found at City Walk can be found in other local malls that cater to consumers engaged in typical shopping patterns.<sup>4</sup>

A strong counterpoint to the work of The Jerde Partnership can be seen in the retail work of Altoon + Porter Architects which has been based on a conscientious effort to bring a sense of



Horton Plaza, San Diego. The Jerde Partnership, Inc., design architect.



civic institution to retail architecture. Projects such as Arden Fair and Lincolnwood Town Center seek to echo the institutional nature of the city centers they are replacing, creating a presence, a destination, an architecture that becomes a significant part of the history of the locality in which it is built.

In any event, architecture can play an important role in every retail strategy, on the one hand, reaffirming low price perceptions of warehouse-oriented consumers, and, on the other hand, creating a unique environment for the consumer engaged in extended problem solving.<sup>5</sup>

It is almost axiomatic that if a product isn't selling, some aspect of the marketing mix needs adjustment. The product itself may be lacking; the price may be too high or too low; the placement in the market may be too narrow or too unfocused; or, the consumer may be unaware of its existence.

Yet simply because something *is* selling does not mean that the optimal marketing mix has been achieved. This dichotomy is at the center of the confusion that surrounds all the efforts which, taken together, constitute 'marketing'. In our present mass-merchandised, over-saturated, hyper-frenetic marketplace it seems as though the much pursued, often maligned, and always harried consumer is courted and brow-beaten with so many marketer-dominated messages that we should not be surprised to witness consumption patterns that may not correlate with either actual or expressed needs. With this in mind, it might be helpful to look briefly at consumer behavior theory in order to hypothesize what, if any, impact architecture may have.

## CONSUMER PSYCHOLOGY

There are at least three competing (though not necessarily mutually exclu-



Arden Fair, Sacramento. Altoon + Porter Architects, expansion and renovation. Photo, Jane Lidz.

sive) theories that attempt to describe consumer behavior. The oldest is arguably 'classic conditioning'. It is based on the work of researchers, such as Pavlov, who argued that behavior is capable of being influenced when a naturally occurring stimulus (called an 'unconditioned stimulus') is paired with another controlled stimulus ('conditioned stimulus'), eliciting a desired response ('unconditioned response'). In Pavlov's famous experiments, dogs were caused to salivate when a bell was rung. This was accomplished by the coincidental presentation of food and ringing of a bell. Eventually, the sound of the bell alone was enough to cause the dogs to salivate in anticipation of the food they expected to receive.

In the commercial setting, this type of conditioning might be effective where the promise of a consumption outcome has been closely associated with some other marketer-controlled stimulus. For this to be effective, however, the response must be unconditioned. That is, it must be the natural result of some anticipated stimulation.

McDonald's 'Golden Arches' are a fitting example. The association between McDonald's corporate logo and the 'food' it serves is so strong that the signage might possibly induce a psychological craving for hunger satiation when the patron is exposed to it. This



City Walk, Los Angeles. The Jerde Partnership, Inc., design architect.

unconditioned response would only be affective for someone who had developed a strong liking for McDonald's product offerings by making repeated purchases, thereby being repeatedly exposed to the conditioned stimuli, that is, the logo. It is important to note that an opposite effect or a diminishment of the effect might result if negative outcomes were associated with the conditioned stimuli.

Another theory that has gained popular attention is 'operant conditioning'. Championed by the noted psychologist B.F. Skinner, it is based on the ideal of rational scientific investigation, and argues that while unconditioned stimuli do have an effect, it is operant behavior that is reinforcing and which creates the stimulus for repeated behavior. In other words, the unconditioned critical response is followed by a reinforcing stimulus that influences the probability of the next behavior event. The reinforcement can be either of a positive or a negative nature.

Using Pavlov's dogs again as an example, if the dogs had been rewarded for some behavior, like barking, the experiment would have been based on operant conditioning. An architectural example of this type of conditioning is more difficult to illustrate because architecture is not a reinforcing stimuli that can be applied or withdrawn instantaneously based on behavior outcomes. However, if a retail setting sepa-

rated the process of arrival from that of departure and distinguished between shoppers who made a purchase and those who had not, then purchase behavior or consumption perceptions could be reinforced during the process of making an exit, thereby enhancing the likelihood of repeat patronage. A rather loose example of this type of strategy is employed by IKEA, the discount warehouse furniture importer. The design of each IKEA virtually requires each customer to traverse through a one-way labyrinth that passes every department and product on display. In many stores, the snack bar and toilets are only encountered once the checkout line has been cleared.

A third theory attempts to attribute the primary motivation for behavior to cognition. This 'cognitive behavior' theory assumes that in addition to being sentient, humans are also rational and their behavior is motivated and, to a large extent, controlled by conscious thought processes. Where the first two theories are largely based on mechanistic assumptions of the response to various stimuli, cognitive behavior theory assumes that in addition to objective physiological responses to both internal and external stimuli, subjective desires, likes and dislikes, fears, and foibles influence behavior.

Architecture based on this theory assumes that consumers' purchase decisions are due at least in part to information processing. Because architecture housing commercial activities sends overt signals associated with product quality and service, consumers glean information and thus form initial opinions about the likelihood of need fulfillment based on external environmental cues. This theory argues for commercial activities to be housed in architecture that meets or exceeds consumer expectations regarding the activities housed within a given built form. For example, an exclusive restaurant would not want



to be housed in architecture associated with the fast-food industry. In essence, cognitive theory implies a process of design that is self-aware and conscious of the perceptions it is creating.

Certainly, a predisposition toward one theory or another will result in the use of that theory to explain observed behavior. The use of these theories by marketers is undisputed. But, to what extent are they capable of influencing buyer behavior? And, for architects, how are they embodied in form?

It is natural to be concerned that marketers are somehow controlling behavior or are causing consumers to make spurious associations about consumption outcomes that may not exist in fact. While I am sensitive to these concerns, I am not persuaded that consumers are easily manipulated. Additionally, research in environmental psychology suggests that while environment can be a factor influencing behavior, it cannot 'determine' it or be used with any certainty as a predictor. I argue that these theories are relevant only

at some very basic level. The real value of this information for the marketer or architect lies not in finding ways to manipulate behavior, but in ensuring that when conditioning occurs during the decision making process and ultimately consumption itself, it is not invalidated because of failure to meet consumer expectations. Conditioning is only affective so long as the outcomes are consistent with the reward or punishment offered.

Traditional economic theory, which is based on the creation and uses of capital, assumes that humans are ultimately motivated out of self interest. However, an understanding of behavior based on traditional microeconomic theory is insufficient because it is based on the assumption that consumers maximize utility. Typically, measurement of utility has been based on some form of specie transaction. But in fact, consumers do not maximize utility, unless psychological needs are factored into the utility equations. The difficulty, as Skinner pointed out, is that needs which are activated or influenced by cognition are in an 'other realm' and cannot be measured scientifically. If a consumer is aware of efforts to influence behavior and fails to consciously accede to those efforts, the resulting behavior may very well be the exact behavior that was being discouraged or the very opposite of what was desired—even when the dollar cost associated with the transaction tends to sub-optimize economic utility.

I argue that in addition to the limited ability of marketers to actively control behavior, the awareness of any such efforts by consumers can do more harm than good unless consumers see those efforts as being benign, playful, or irrelevant. None of this, however, negates the possibility that some positive influence consistent with marketer intentions might be exerted over the consumer. I believe that this is possible



Tustin Marketplace, Legorreta Arquitectos.



Lincolnwood Center, Chicago. Altoon + Porter Architects. Photo, Don Dudroff Sadin Photo Group.

within the context of reinforcing consumer perceptions and consumption outcomes. To some this may seem intrusive. I argue that this is a natural result of competitive pressure and an interest in strengthening the symbiotic relationship between buyer and seller.

## CONCLUSION

The relationship between producer and consumer, between merchant and patron, is not unfamiliar to the architecture profession. We cater to the aesthetic needs of those desiring to enclose space. And certainly, architects have been known to engage in a certain amount of 'posturing' for the purpose of wooing potential clients. Whatever affectations might be adopted by architects, whether pretentious or not, they amount to little more than the desire to present an image consistent with the expectations of those one wishes to attract. In essence, we position ourselves relative to our architectural competition.

Commercial architecture performs the same role: *It is commercial and will*

become even more so as retailers scramble to protect market share. In a stagnating economy, the only way for aggressive companies to continue to expand and increase their profitability, aside from gains in productivity or cost mitigation, is to displace other retailers in their market segment. This is done by honing every aspect of the marketing mix—including the firm's 'architectural signature'.

To those who decry the 'entertainment' aspect of retailing, I would suggest that they are perhaps ignorant of the history of commercial exchange. Commercial activities are based on need fulfillment at many simultaneous levels—from basic biological imperatives to higher order self-actualization.<sup>6</sup> While the provision of a positively need-fulfilling product or service is the basis of marketing, from the standpoint of the consumer it is the alleviation of a potentially negative condition that



Westside Pavilion, Los Angeles. The Jerde Partnership, Inc., design architect.



brings excitement and relief to the commercial exchange. The new breed of critics who argue that commerce should be conducted with more decorous sobriety and less wanton merriment have forgotten the festive historic marketplace.

We may wonder whether market research should be used in architecture or whether this is an unseemly adulteration of the profession. Commercial architecture has evolved as has the general understanding of consumer psychology. But while architectural innovation can be argued to have been driven by materials technology and the aesthetic of its application to built forms, consumer behavior research has not been seriously applied, largely owing to a lack of understanding of its underlying psychological theories.

The commercial uses of architecture have been denigrated to a large extent because of the often crass nature of commercial exchange. Consumers have become cynical about claims that have failed to be borne out by actual practice. Architecture has served to exacerbate the situation by reinforcing consumer cynicism. The facades that attract consumers, but are only skin deep, heighten the sense of falseness and deceit. Architecture alone cannot remedy the situation. The general attitude toward consumers and the marketplace must change.

If the associations drawn between a product, its environment, and its consumption outcomes are valid and planned, then the efforts to communicate these associations to the consumer must be 'honest'. This implies a design process that is self-aware and conscious of the overt associations being created between architecture and the commercial activities it houses. Inappropriate commercial architecture misrepresents purchase or consumption outcomes. Conversely, it should be clear that appropriate commercial design will rein-

force and validate perceptions about product or service quality, presentation, and consumption. When consumers can rely on perceptions drawn from the built commercial environment, the result will be conducive to need fulfillment and all parties to the commercial exchange will benefit.

## NOTES

1. A company's 'marketing mix' is composed of those variables that are under its direct control. Typically, these have been simplified to include the product offering, its price, placement, and promotion. While consumers lie outside of this set of variables, they are usually at the heart of the resulting strategy. A marketing mix focused solely on production will result in dismal results and a heavy emphasis on sales promotion. For our purposes, considerations of product placement include questions of the type of architecture in which the product will be housed while awaiting sale.

2. An 'attribute bundle' is simply the sum of all individual quantitative and qualitative properties of a product or service. In general, each additional attribute offered is considered to increase the likelihood that the total offering will fulfill need. However, at some point, the inclusion of an additional attribute will exceed the threshold of fulfillment and will be unrewarded by the consumer. Thus there is a constant need to balance the attributes offered with those being sought by the consumer. Inclusion of too few attributes in the product bundle will result in only partial need fulfillment and may prompt an extension of the search for a more fulfilling solution. Providing too many attributes may result in a price point that exceeds the benefits relating to the consumer's actual needs. Providing the wrong bundle will result in negative consumption outcomes.

3. It is interesting to note the transformation that is taking place within the 'mall' industry. As the segment matures it is becoming clear that most markets are saturated or even over-saturated with mall offerings. This has had the effect of placing malls in competition with each other as they attempt to attract customers. Malls, like the smaller retail units they house, have had to develop positioning strategies to set themselves apart from their cross-town rivals. Early in the development of the mall typology, the need to actively solicit consumer attention was not usually necessary. Because of market saturation, malls now vie for the same consumer. Malls like South Coast Plaza and Fashion Island, two Orange

County malls within a few minutes of each other by freeway, must aggressively compete for customer patronage. Fashion Island recently underwent a multi-million dollar face lift. The redesign efforts went into adding shopping amenities that augment the shopping experience at this decidedly upscale mall with the intent of making it the shopping destination of choice.

4. In the future, we are likely to see several general trends. First, the entertainment factor is likely to continue to increase as competition increases. Second, as malls continue to refine their retail strategies, they will target narrower market segments. Third, large retail department stores will either find a way to be as interesting as the mall experience, or they will cease to exist. I envision department stores in the future blurring the distinction between where the mall ends and their lease line begins, thus luring the strolling shopper inside. As malls continue to expand in size, it may become necessary and desirable to aggregate retailers offering similar products into close proximity. If developed properly, this strategy would have the effect of increasing traffic in areas that are traditionally bypassed by shoppers and would result in higher lease rates in these areas.

5. Consumer search patterns have been classified by Engles, Blackwell, & Miniard as falling into one of several categories. (1) 'Routine problem solving' occurs when the consumer has determined after an initial search that a particular product meets a given need. Once this decision has been reached and for as long as the product continues to satisfy the given need, the product search is limited to finding a preferred brand. This type of problem solving is typically price sensitive. (2) 'Limited problem solving' involves some use of information processing in the decision process. The need being alleviated is of a higher order than those found in routine problem solving and probably involves perceptions about self. (3) 'Extended problem solving' occurs when needs that are new or not commonly experienced are perceived to exist. This type of need search is usually lengthy and involves considerable effort on the part of the consumer. Buying toothpaste is an example of a product that is routinely purchased. A piece of clothing requires a limited search, while an engagement ring is an object that would typically require extended problem solving. The architecture that houses each product type and the associated decision-making activity would differ according both to the expectations of the consumer and the margins that resulted from the sale of the product.

6. The problem-solving categories of Engles, Blackwell, & Miniard correlate nicely with Abraham Maslow's hierarchy of human needs. He hypothesized that needs could be classified as ranging from very basic biological needs to very complex psychological needs. He argued that they

could be arranged based on their prepotency in the following order: physiological needs, safety needs, social needs, esteem needs, and finally, self-actualization needs.

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# Space Replaces Us

*Michael Bell*

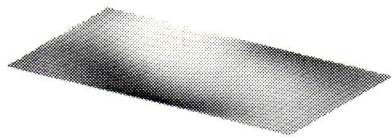
In a sense this essay was made rather than written. The component parts of the essay were written simultaneously in various text blocks that are arranged analogous to how the research is being done. Since this edition of *Architecture California* focuses on research, it makes sense to try to portray the research itself rather than its conclusions. I think of these few pages as a document. The essays are arranged to run simultaneously—analogous to the ideas of simultaneity and time addressed in the architectural projects and in the analysis of Picasso's "La Fillette Sur La Boule."



John Coltrane was asked why two bassists play on his album *OM*. "Because," he explained, "I want more of the sense of the expansion of time, I want time to be more plastic."

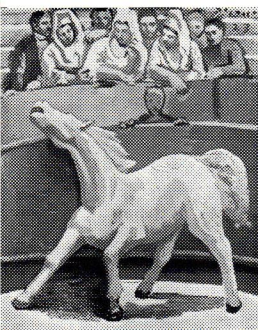
The spatial infrastructure of California's 'cities' can no longer be characterized as plastic in any traditional sense of the word. Space in California is progressively becoming thinner.

A computer model indicates the critical load at which a flat plate under pure shear load will become elastically unstable (i.e., when buckling will occur). The model was generated with Algor's finite element analysis software.



*Joy wants the eternity of all things, deep, deep, deep, eternity*<sup>1</sup>

TWO PAINTINGS by Pablo Picasso chronologically frame the artist's experiments in Cubism. "La Fillette Sur La Boule" of 1904 and "The White Horse in the Ring" of 1923<sup>2</sup> present what might be called an inversion of Cubism's methods of apprehending time's flux; of Cubism's struggle to define the *moment*. Both paintings present extremely isolated events: the young girl depicted in "La Fillette Sur La Boule" will soon tumble from her precarious position atop the ball, and in "The White Horse in the Ring" the horse is in a violent state of duress though those that witness it seem unalarmed. The key term is *moment* and the subject of this analysis is the exfolding of the moment—not in the Cubist sense of unwrapping and reframing the curvature of time, but instead a compressing of the single moment so that it retains its apparent centrality while encompassing other times and other moments.<sup>3</sup> The two paintings in question achieve this through a kind of gravitational buckling of vectorial forces. Picasso's figures are bundles of time, singular and centralized in narrative and form, but impacted by what I would call a redundant



Pablo Picasso  
*The White Horse in the Ring*, 1923

# 1 Lightness and weight (density)

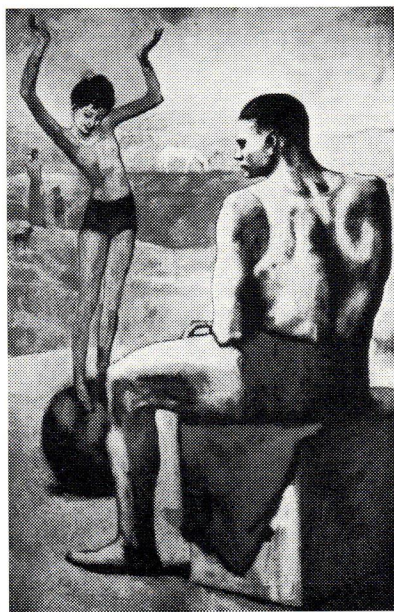
Was he correct or not? That is the question. The only certainty is: the lightness/weight opposition is the most mysterious, most ambiguous of all.<sup>1</sup>

In a proposed but unexecuted work, Gordon Matta-Clarke planned to remove sections of a building's supporting steel columns and insert steel cubes. Though still supporting the building, the cubes would operate with a kind of visual and static redundancy in transposing the elegant vector paths of the columns with the partially extraneous mass of the cube. While isolating and bundling the building loads in the cubes brings the forces into view, it simultaneously removes them from visual/retinal comprehension; the nature of forces in the cube simply can't be understood in terms of vectorial gravitation paths and subsequently in terms of vision. In another unexecuted work of the same period, Matta-Clarke proposed digging a hole in the floor of his studio that would expose the building's foundation. He spoke of liberating the weight of the building above—causing a lightness.<sup>2</sup>

When I was young my father came home from work one night and tossed me a small bottle. Expecting something light the bottle plopped into my hands with a heavy thud. It contained mercury. In all the years that have passed since, whenever I come across that bottle on the shelf I see it differently.

<sup>1</sup> Milan Kundera, *The Unbearable Lightness of Being* (New York: Harper and Row, 1984), 6.

<sup>2</sup> Mary Jane Jacob, *Gordon Matta-Clarke, A Retrospective* (Chicago: The Museum of Contemporary Art, 1985), 29.



Pablo Picasso, *La Fillette Sur La Boule*, 1904.



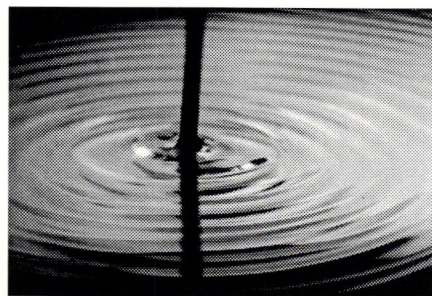
# Unframing / unframed 2

(everywhere all at once)

In the essay "Mimicry and Legendary Psychasthenia," Roger Cailliois proposes that it is an organism's ability to distinguish itself from space that allows it to form a coherent concept of self—of personality.<sup>1</sup> That frame, that distinction between the self and space, however, is neither clear nor easily defined. The Double Dihedral House is actually a house and art gallery situated opposite each other on four acres of Santa Fe, New Mexico desert. The same cruciform volume is framed and unframed in the two structures and the house and gallery are constituted in reference to their paired *other* structure. In the house the roof and floor are cut away to reveal the interior. A single gaze traverses the desert floor piercing both building volumes—its velocity pauses and falls, pauses and falls, in a kind of syncopation through each vertical layer. Vision threatens to collapse frames to points and to thereby erase the distinctions between within and without. The unframed moment is still intact but exfolded into all moments. Naturally the body resists such virtual physics—in doing so our struggle for autonomy is made vital in the shedding of the architectural frame.

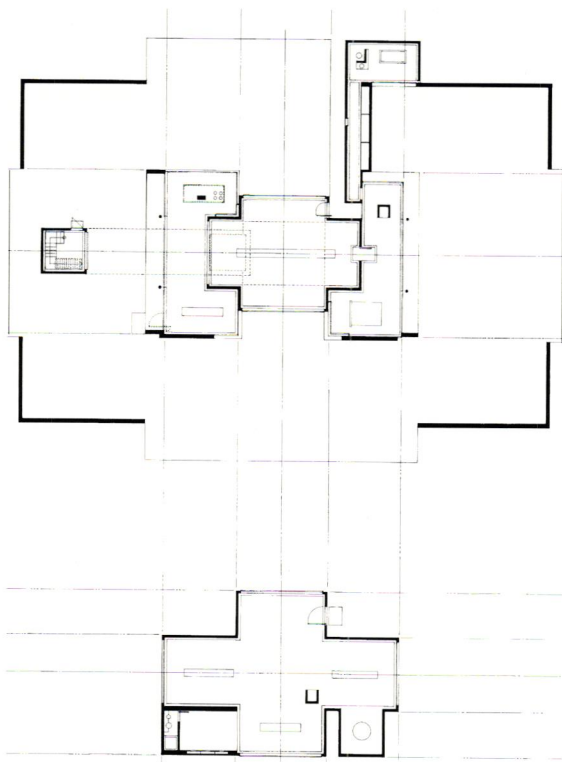
<sup>1</sup> Roger Cailliois, "Mimicry and Legendary Psychasthenia" in *October: The First Decade* (Cambridge, Massachusetts: MIT Press), 70.

*Waves generated in water at the center of a square petri dish reach the sides before reaching the corners. The waves finally reach the corners of the container, but only after multiple reconfigurations have taken place in their pattern, intensity and depth. To reach the corners, the surface membrane of the waves buckle.*

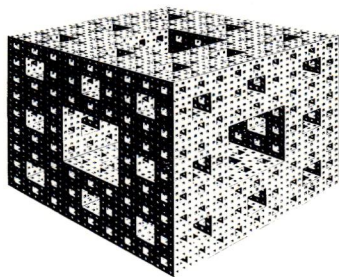


gravitational force that has erupted from the neat vectorial paths of simple statics. In both paintings, and in numerous others executed in the years immediately following Picasso's experiments with Cubism, the introduction of a redundant gravitational force in the figure and what appears to be a resistant and rising ground plane instigate a time-generative stasis that bundles up the multiplicity of Cubist time-frames into a narratively and materially singular moment that threatens to explode and implode simultaneously.

In "La Fillette Sur La Boule" and "The White Horse in the Ring," the visual mass of the figures seems to take on a weightier gravitational force than the eye anticipates. In some cases the figures seem to be pulled to the ground by some extra-gravitational yet unseen force. In the case of "La Fillette Sur la Boule," one expects the cube upon which the male figure sits to rise if he relieves it of his weight; the eye invests the inert cube with a virtual upward and expansive force to resist the visual weightiness of the figure upon it. The inert stone is given a generative potential. The gravitational vector path that acts to keep the male figure firmly seated aligns harshly with the geometric construction of the subject's spine, while the figure's calf and femur are left visually limp, lighter than one anticipates. One senses a lightness in the leg and foot and a redundant heavi-







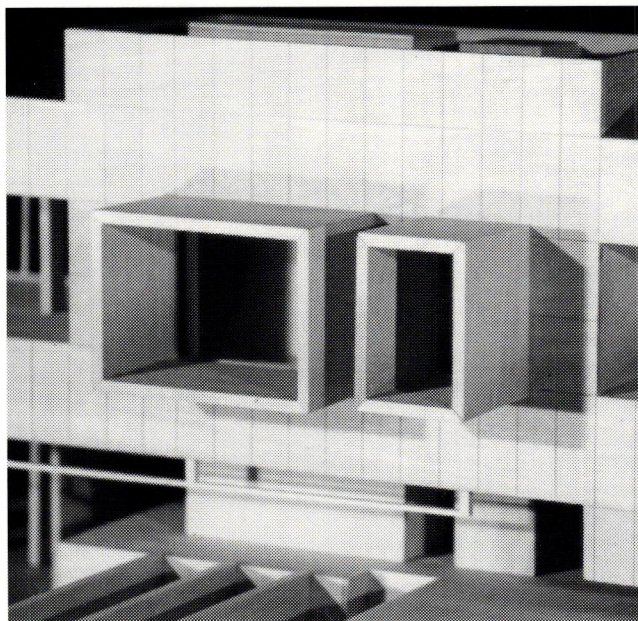
ness in the torso. Both situations are produced without added mass (the male figure is naturally sized though muscular). A pictorial conspiracy of gravitational trace vectors and human infrastructure allows Picasso to instill a virtual reading of thwarted statics that acts to compress the figures while threatening their unframing. Rather than finding direct vectorial paths of reconciliation to the earth which generates them, Picasso's pictorial construction causes a buckling to occur along the gravitational paths. Forces which through analysis are considered to move in linear form along elegant pathways here meet resistance and must dissipate into figurally redundant forms of corporeal matter and inert stone. In the case of the seated male and the stone cube one senses these forces are eventually absorbed.

Most of this discussion has focused on "La Fillette Sur La Boule," but the reconciliation of statics is equally complex in the "The White Horse in the Ring." The undulating horse, collar sinking, head forced to a vertical orientation, chest low, back high, legs extended in a position controlled by internal musculature, here appears as if it is resisting something outside of itself, something applied. It is not difficult to imagine the legs are buckling under an upward ground force rather than a downward gravitational load. The passivity of the spectators and the shallow curvature of their architectural arrangement recalls the anatomical theater and its air of detached sober experimentation. The

### 3 Dihedral topology (space inside out)

"... to turn space inside-out like a torus glove and make figure and field ambiguously one." <sup>1</sup>

Complex topological surfaces find their strict description through geometry and differential equations. The combination of analytical methods allows the description of minimal surfaces. Minimal surfaces are boundaryless; an embedded minimal surface is non-self-intersecting as well as boundaryless. Described in finite terms a minimal surface is capable of infinite extension without self-intersection. Only three such figures were known until recently; the plane, the catenoid, and the helicoid.<sup>2</sup> Others approximate the conditions described, such as the Menger Sponge and the Hypersphere. Their lack of boundary, of framing datum, of segmentation threatens readings of space that seek dis-





tinctions or edges. Inside and outside simply don't exist along their continuous surfaces. The projects depicted below approximate topological surfaces and figures in configurations that seek to apprehend Robert Slutzky's simultaneous figure/field. The resulting continuity of space retains the finite density and form of architecture yet releases space from time. Distinctionless and thereby timeless, no space is privileged over another.

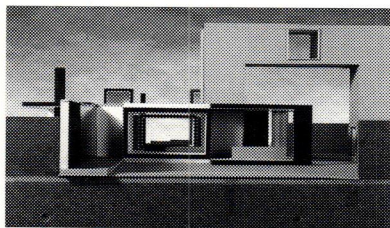
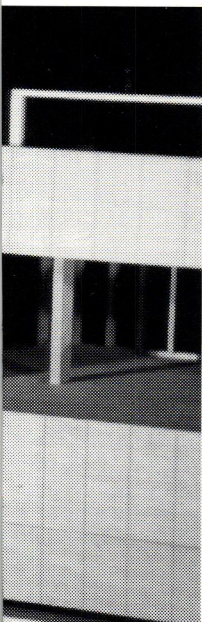
<sup>1</sup> Robert Slutzky with Joan Ockman, "Color Structure Painting" in *Robert Slutzky, 15 Paintings, 1980-1984* (San Francisco: Modernism Gallery, 1984).

<sup>2</sup> Ivars Peterson, *The Mathematical Tourist* (New York: W.H. Freeman and Company), 56-59.

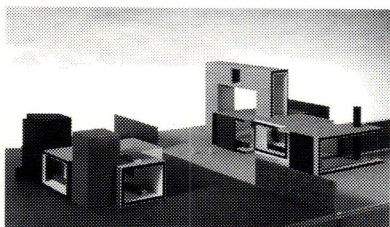
group of spectators seem to be witnesses to a physics experiment brought to bear within the realm of art and not unlike the *physics* of Robert Smithson, Michael Heizer, or Richard Serra. Horses already have a tremendous physical presence—their musculature has the virtual appearance of expansiveness even when still. Picasso's manipulation of mass, however, seems absorptive. Picasso's bodies ache with the painter's struggle to depict a time, to eke breath from inert material.<sup>4</sup>

A cross section through the ideal vector would take the configuration of a dimensionless point. Brought into the pictorial realm, it is usually given a circular form and extended into a cylindrical path. The buckling of forces instigated by Picasso's statics, however, causes a failure or rupture in the path. Casual semantics indicates a fragmentation, an explosion, but the situation is more compelling and more topologically complex than such an analogy allows. Topology is the realm of mathematics that combines differential equations and geometry to describe complex surfaces. In this case, it can provide an analysis of the vector's failure. Recalling the ideal of a cylindrical pathway, topology allows the unfolding and mapping of the thwarted vector's surfaces at the point of buckling. The core of the vector, compressed by the buckling, flattens itself into a membrane—a shear field in which gravity moves parallel to a surface in sheet formation rather than in vector formation. The direction and characteristics of the sheet are molded by the intensity of buckled forces and the nature of the matter through which they move.

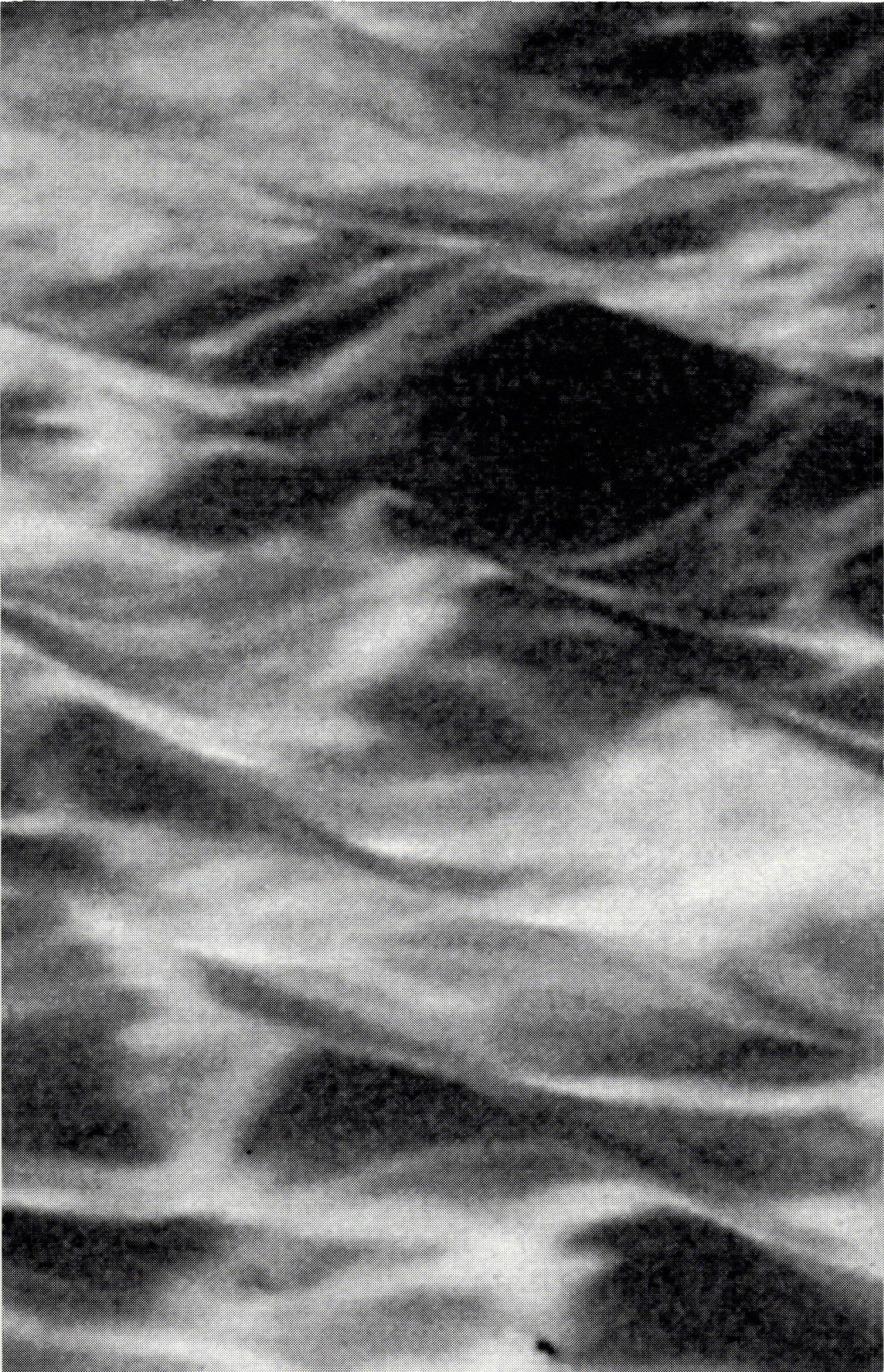
In a proposed but unexecuted work, Gordon Matta-Clarke intended to remove sections of a building's supporting columns and insert steel cubes. The result would appear something like the cube that supports the male



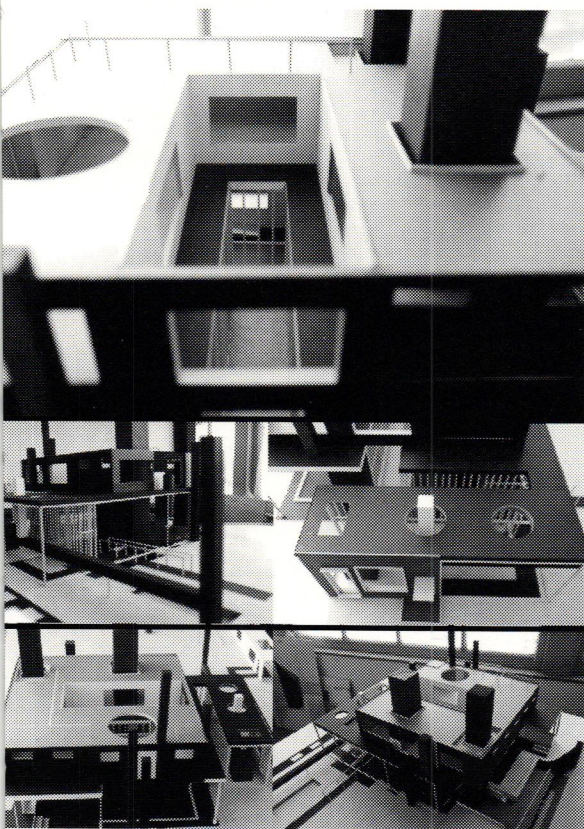
above and below: *Lyman House*, 1990/91  
left: *Berlin Stoa*, 1988







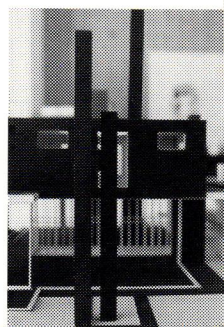




The shell of the Physics Pre-School and Kindergarten operates as a structural beam; it is designed to resist buckling in its thin plate pre-stressed concrete construction through its box-beam configuration. The walls, floor, and ceiling act together in a tuned configuration that induces a virtual reading of energies along their surfaces. Holes are cut for windows in neutral surfaces with glass inset and recessed parallel to the building's surface. The co-planar flow of tensions along the surface of the structure even involves the building's paint in construction. The brittle shell induces a reading of spatial membranes like those found within agitated water; the pointal coordinates of a complex surface waft with the ebb of waves. In this case the building charges the air with a buckling musicality. The oculus roof garden causes a concentric wave ripple that must buckle to accommodate itself to the cubic building volume. The volumetric building shell infolds (collapses) to form the extruded shelf in the cafeteria. Upstairs is a kindergarten, downstairs a day school and playground.

figure in the "La Fillette Sur La Boule." Though the cubes would isolate the load forces present in the structure their redundancy of form would effectively remove the forces from the realm of retinal comprehension.<sup>5</sup> Vast cultural differences aside, Matta-Clarke and Picasso present an idea of *redundancy* in form and matter that disguises the direct reading of gravity. Bundled energies within matter induce a topologically complex flow of gravity across shear membranes; the linear quality of vectorial paths that allows directional readings is replaced with omnidirectional centerless shear fields.

The definition of stasis is somewhat misleading; in short, it usually suggests something to the effect of motion apprehended. What the definition fails to portray is that the apprehended motion—pent up, stopped and not of its own accord—threatens to move again. The singular moment accorded by stasis implies other moments either in the resumption of *forward* motion or in the recognition of the motion that was suspended. Both conditions break the general vectorial concept of time as linear or sequential. Stasis virtually exfolds the moment implying other moments, other times, and multiple readings of what would be time's locus. Buckling eradicates time's datum and acts to unframe time; it projects multiple modes of time while retaining the singularity of the moment.



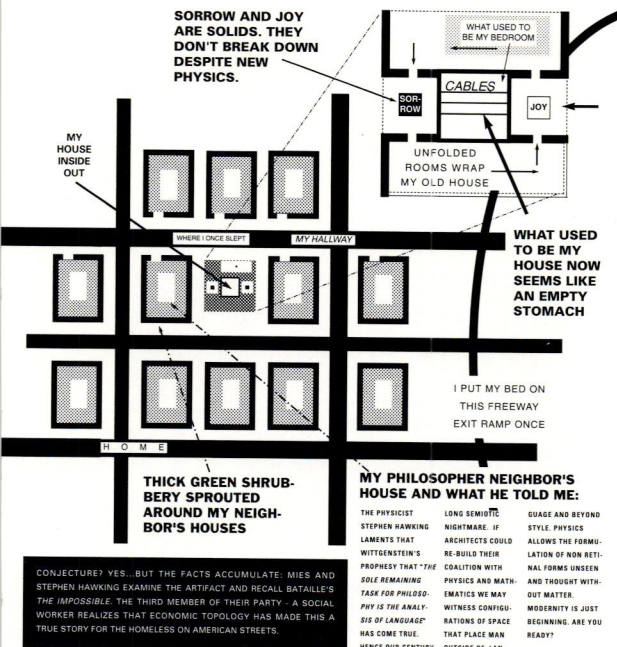




DURING THE TOPOLOGICAL REVOLUTION OF 1993 MY HOUSE WAS TURNED INSIDE OUT. MY NEIGHBOR'S HOUSES RESISTED BUT THICK GREEN SHRUBBERY SPROUTED AND BELTED THEM ALL INSIDE TILL THE PHYSICISTS COULD FIGURE OUT WHAT HAD HAPPENED. I CALLED MY NEIGHBOR ON THE PHONE AND HE TOLD ME WE WERE ABOUT TO ENTER THE REALM OF TRUE MODERNITY BUT UNTIL THEN WE WOULD HAVE TO BE CONTENT TO SPEAK ON THE PHONE. NO ONE WAS COMING OUT PAST THEIR SHRUBS. MY HOUSE DIDN'T HAVE A SHRUB SO I WENT OUT TO SEE WHAT IT WAS LIKE.

# SPACE REPLACES US

## TOPOLOGICAL CITY/HOUSE



### NOTES

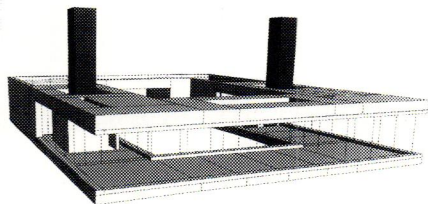
1. David Wood, *The Deconstruction of Time* (New Jersey: Atlantic Highlands Press, 1989), 22.
2. Gertrude Stein, *Picasso* (Boston: Beacon Hill Press, 1959).
3. Wood, *The Deconstruction of Time*, 11. "Nietzsche offers us a brilliant example of how to displace a frame of reference (in this case, the metaphysical concept of time) from within—It retains the centrality of the instant, only to explode the traditional value of such a primitive concept. For Nietzsche, the instant opens out onto what is other. But at the same time as the instant is a non-recuperative opening out, it is also an embodiment of all those identical moments it repeats."
4. Henri Focillon, *The Life of Forms in Art* (New York: Zone Books, 1989), 95. Originally published as *La vie des formes*, 1943. In "Forms in the Realm of Matter" Focillon presents the immutability of matter: "Art is bound to weight, density, light and color. The most aesthetic art, striving modestly and with few resources to attain the most exalted regions of thought and feeling, not only is borne along by the very matter it is sworn to repudiate, but is nourished and sustained by it as well. Without matter art could not exist... Whatever renunciation art makes of matter merely bears witness anew to the impossibility of its escaping from this magnificent, this unequivocal bondage."

5. Mary Jane Jacob, *Gordon Matta-Clarke, A Retrospective* (Chicago: Museum of Contemporary Art, 1985), 29.

Graphic Design:  
Sze Tsung Leong with Michael Bell

or its thrilling qualities of exhilaration and potential. This essay has tried to address the nature of time and the moment in the modern city.

*Space Replaces Us* received an honorable mention award in the Japan Architect sponsored *House With No Style* competition, written and judged this year by Rem Koolhaas. Only one board of two is published here.



# Making Architecture

*Ralph J. Roesling, AIA*

Sincere architecture is conceived and constructed at a certain point in time, it has to do with a certain philosophical context, a certain epoch.

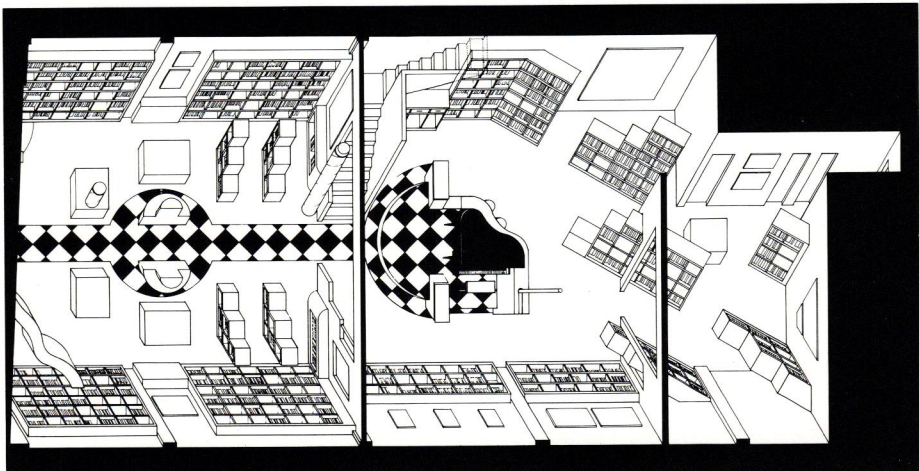
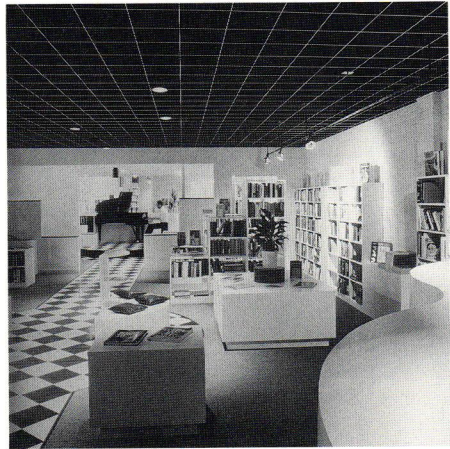
Within the great works of architecture there exists the cultural memory of the individual and society. In each project the consciousness of space, time, and reality exists for that era. For example, the Gothic cathedrals contain the mystery and darkness of the Middle Ages with an emphasis on the symbolism of religion. Another example is the ancient Japanese temples that represent a philosophy of man and nature as a unified whole. There is no distinction between building and garden space.

I believe that the great architects of history have worked honestly and sensitively within an epoch and place. When they have created artifacts, they have artfully portrayed this context.

My work, and hence my philosophy, is of the Modern epoch. I cannot

deny the heritage of the Modern Movement. This movement is an inspiration for me because of its exploration of abstract ideas and the articulation of building materials to express these ideas.

Architecture for me is about abstract and physical connections: connec-



Words and Music Bookstore, San Diego.



tion with the site, connection with the client, connection with thought and emotion. The most significant kind of architecture is that which makes a 'universal connection' with every epoch. It speaks of the human condition just like the Greek plays and Shakespeare. This universal connection grows out of a conceptual beginning that has nothing to do with circumstance, place, or time. A profound conceptual beginning comes from an understanding of human existence and emotion. Louis Kahn called this point of beginning 'Volume Zero'.

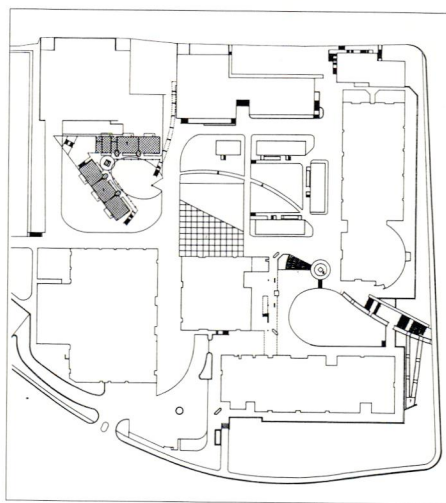
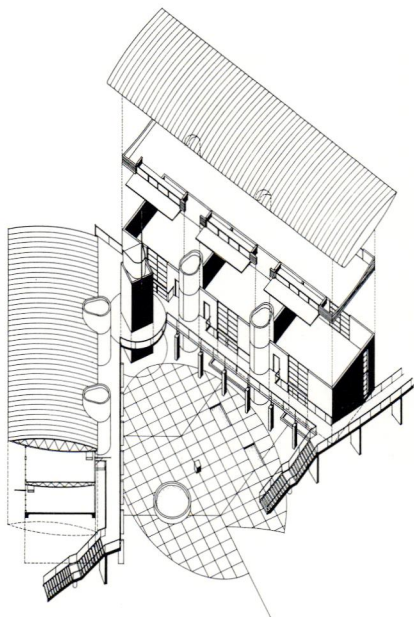
In the process of making my own work, my purpose is to find meaning without classification and analysis. This meaning is inspired by the spontaneous and intuitive spirit. The first encounter I had with this intuitive spirit was my first success with Chinese ink painting. I was painting a horse, a very spirited horse. I realized that the anatomy of a horse is very complex and difficult to draw in a convincing manner. I knew the spirit of the horse, however, and was able to intuitively portray this essence of the animal with a few strokes of the brush. This was the 'Volume Zero' for the painting of this horse. I captured something about the horse's anatomy that was spontaneous and intuitive.

This intuitive spirit emerges through the process of establishing concepts. Form or composition emerges out of a realization of what can exist. Architecture cannot be satisfactorily conceived or described by systems that can be classified, analyzed, or measured. This realization of what can exist is intuition.

For me, architecture exists in this realm of intuitive consciousness of existence.

*I express, I build, therefore, I know that I exist.*

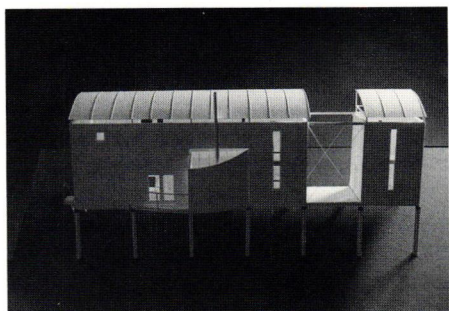
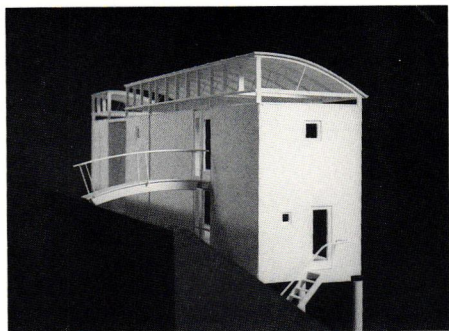
I believe that architecture philosophy has evolved beyond the pure rationalism and functionalism of the 1920s



San Diego High School addition.

and has incorporated some of the contemporary questions and problems contemplated by philosophers. Why do I exist? What is the meaning of life?

My own philosophical interest has to do with the uniqueness of being alive as experienced through the senses of the individual, intuition being the most important and reliable of the senses. By creating, the intuition is exercised and reaffirmed as a sense.



Cabin Retreat.

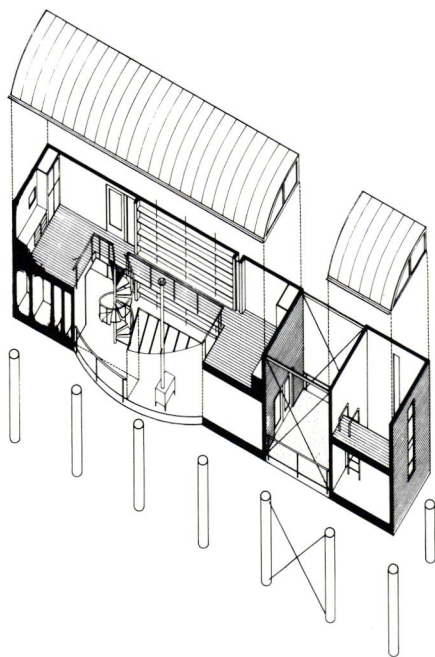
An example of this philosophy is one of the first projects completed by our firm Roesling Nakamura, Architects, Inc. In *Works and Music*, a bookstore in San Diego, we limited the pallet of materials and colors to mainly black, white, and gray in order to enhance the perception of the books as objects of art. Within this bookstore there is a small performing arts stage and gallery space. By placing books, paintings, sculpture, and musical instruments within a gallery-like setting, the objects take on a different and more important sensory meaning.

The rhythm of space becomes an important design consideration because of the physical length of the space. The space is divided into three rooms, a formal entry or foyer, an informal parlor space in the middle, and a dynamic gallery space in the rear. This spatial order was intuitive and derived spontaneously.

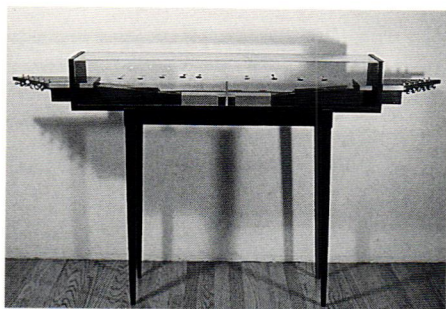
The influence of Japanese culture has enhanced this sensory philosophy

with the concept of *ma* which has a loose translation in English. It has to do with the idea of meaningful intervals or spaces in between. I like to think of it as the profound meaning of indefinite spaces. The ambiguity of boundaries that are porous to admit light. These indefinite spaces are similar to the white spaces of the Zen ink painting or the meaningful silence and rests in music. These are the spaces that your imagination and intuition have to fill in.

In the addition to San Diego High School, my partner Kotaro Nakamura and I were concerned with establishing a new character and spirit for the campus that would be discovered inside the perimeter. The existing campus has a strong perimeter wall like quality that did not open to the urban streets of downtown San Diego. The new addition creates a series of new spaces organized and layered along a diagonal axis on the campus that connects to downtown and Balboa Park. Some of these spaces are clearly defined and some are ambiguous.







Spoon Cabinet.

The new spirit is an optimistic expression of lightness and flight translated into wing-like forms in the building. The landscape strip along the axis, however, is fragmented and ambiguous making the perceived form of the building stronger in juxtaposition.

In a small cabin retreat for the mountains near San Diego, I was inspired by the concept of a vessel. My idea of the vessel is an elegant container. The cabin is a vessel that floats above the forest floor and fills with the light of the forest. This light that has been diffused by large pine trees pours into this tiny cabin through clerestory windows and slits that are orchestrated in order to create a meditative mood inside. The post and beam structure imparts a certain rhythm and character of light in the space. The space of the cabin is one large volume with two sleeping lofts. The north wall of the interior is a large bookshelf. The small studio space of the deck is another room for painting and sculpting.

A small display case was conceived as a kind of musical instrument with strings that could be tuned. Through the collaborative process of making this piece, I was able to discover the essence of the musical instrument: the structure, the mechanics, and the aesthetic quality. The case displays sixteen silver spoons that are supported by the musical strings. There are several kinds of sensory elements at work in this piece: the smell of oiled wood, the vibration and

sound of the strings, the glitter and detail of the silver spoons.

I have found that the intuitive process in the act of making is really where the spirit of architecture lies.

Making architecture is very challenging. It takes a lifetime of work to make a contribution to the realm that underlies physical and measurable presence.

# Forest

*Beverly Willis, FAIA*

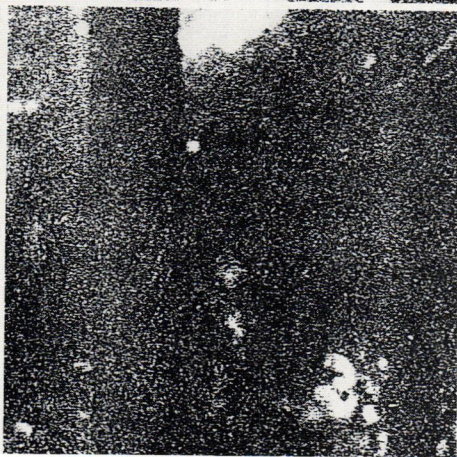
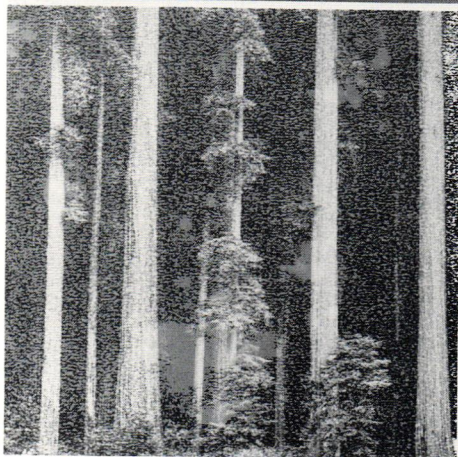
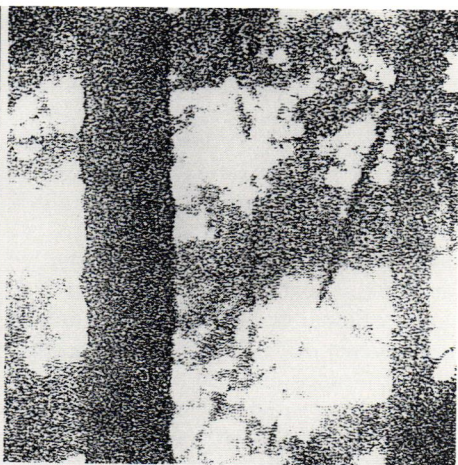
Forest deep. Beckoning. Entrancing.  
The tall, round, barked trunks,  
soaring towards the sky,  
like ancient sentinels.  
Inspiring.

Rooted in the Earth, amongst the granite ledges,  
their branches weave a vaulted arbor.  
A leafy canopy casting lacy shadows on the forest floor.  
The sun's light filtering through,  
creating dappled patterns. Continuously.

Nature's architectural forms.  
Transformation of wood and stone.  
Shelter. Reassuring.

A stone building. An image rooted in the memory of ancient woods.  
Its tall entry columns, solid and transparent walls,  
painted by the sun's shadows,  
a sanctuary for the human spirit.





*"Forest" is part of an in-progress series of morphed computer images and word pictures that explores connections between nature, geometry, and built form. Series publication forthcoming.*

# On Experiencing Buildings

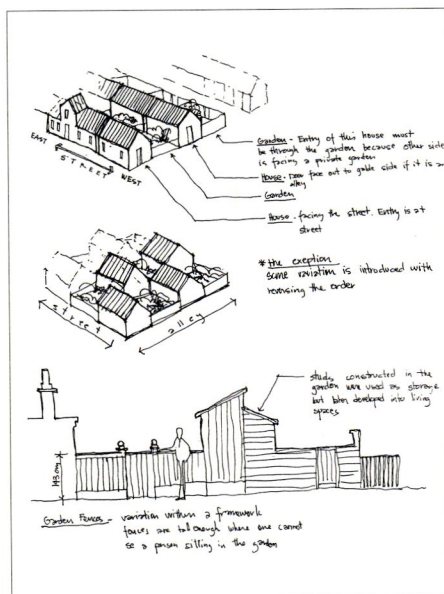
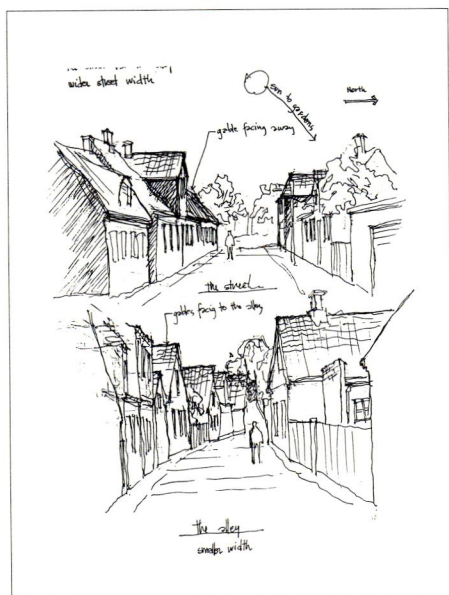
Erik Skoven

Over the past twenty years I have been involved in teaching students of architecture from foreign countries, predominantly the United States. The studies are taking place in Denmark and the faculty is Danish. Typically the students are seniors or graduates studying for one semester or academic year, and in a given semester one will often find more than twenty different universities represented. Grades and credits transfer, since the curriculum is developed in close collaboration with the home universities, and over the years the faculty and I have visited or lectured at most of the schools students come from.

This is the background on which I base the following hopefully provoking, and probably grossly generalizing, comments on *design as inquiry*.

When talking about design as inquiry, inquiry of the limits of architecture within the existing society, I find it important that one know the language in which the object of inquiry is created. It is important that one know existing examples, historical and, in our age of rapid communication, contemporary. The latter, I find, is often overlooked.

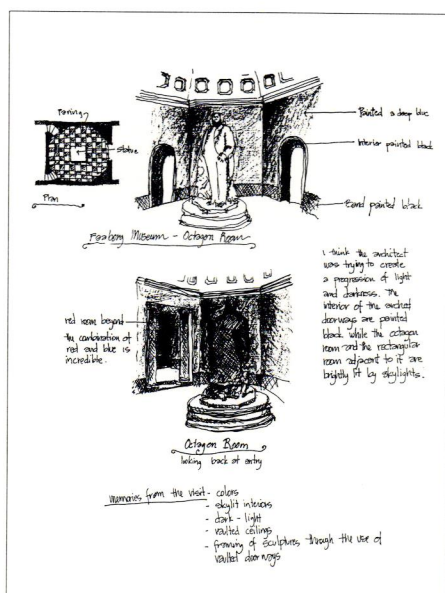
As I take it for granted that students of architecture have the goal of becoming architects, there are a number of relations I find important: technical, aesthetic, philosophical, and the relation to society in general. Without diminishing these, in the following I will propagate one aspect of architectural inquiry that I find to be important, and according to my experiences, perhaps less of a tradition in the United States.

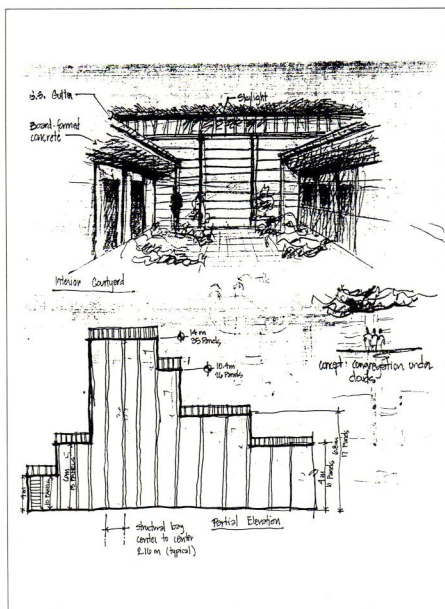
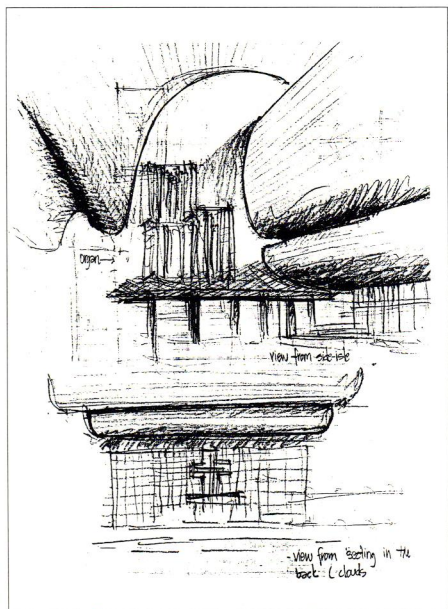




When dealing with literature, not least in scientific texts, there are references—footnotes—referring to previous works within the subject matter. Likewise in novels, music, painting, film—

To see and experience the totality of a building and to bring to this experience references to multiple works of architecture previously seen expands one's vocabulary and enriches the design process. It is a necessity that one be 'literate' in order to 'say something' through design, and existing contemporary architecture offers ready reference material for those who are inquisitive.





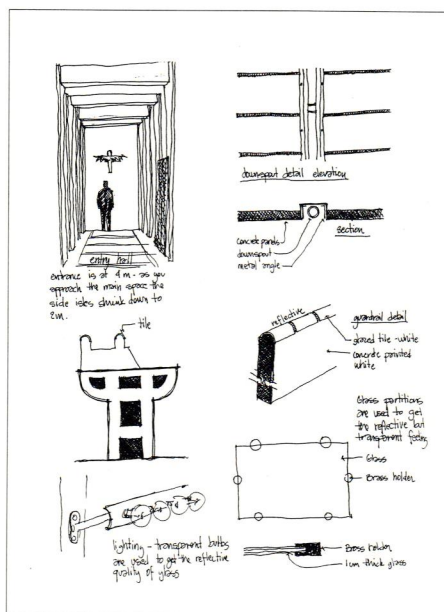
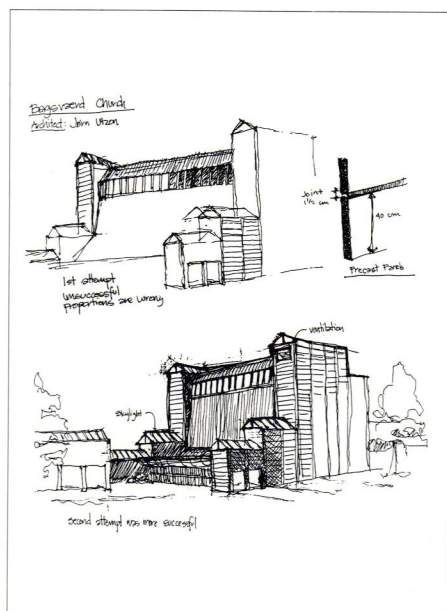
The difference between literacy in Denmark and what I experience with American students could be due to the fact that the attitudes toward architecture are so different. It seems that in the United States there is less of a tradition of studying existing buildings, and when they are studied it is often through published photos and drawings separated from their contexts. Granted, the distances among cities in the United States are much greater than in Denmark or Europe in general, and, therefore, publications may necessarily be relied upon to expose architects to new work. However, as may also be indicated by the general absence of site studies in the United States, this focus on indirect knowledge of buildings further exaggerates the difference since many fewer buildings are published, and, therefore, known, in the United States than in Denmark.

In Denmark, a country with five million inhabitants (and six thousand architects) and a area of sixteen thousand square miles, there are five architecture publications. *Arkitekten* and *DPA* are published with twenty-four

issues per annum, *Arkitektur DK* with eight issues, *Scala* four issues, and *Living Architecture* two to four issues per year. Furthermore, there is a periodical for landscape architecture *Landskab* published ten times each year. These periodicals cover different aspects of architectural design, from the more pragmatic to the highly philosophical and avant garde. However, the most interesting architecture built nationally, as well as a good international selection, will one way or another be published. Furthermore, all national competitions (approximately forty per year) are published with at least six entries. Thereby the not-yet-accepted and the provocative designs as well as the more mainstream become public knowledge.

There is a general knowledge among architects as to what is going on in the immediate region as well as internationally, and architecture students naturally have study tours every year—first in Denmark and Scandinavia, and later on, internationally, in Europe (including west, south, and east), the United States, and Japan. This tradition continues after graduation as vacations





are planned (often causing conflicts with members of the family who may only want to see beaches and sunshine), but as a certain percent of employee salaries is set aside for continued education, it occurs quite often that an entire office of fifteen to thirty persons takes off on a study tour to Amsterdam, Paris, Barcelona, New York, Los Angeles, Tokyo, or Kyoto.

When, as is often the case, Danish architects do relatively well in international competitions, one might attribute this to the fact that they are articulate: they master a relatively broad vocabulary, have command of the 'footnotes', and do not try to reinvent the wheel, but rather to reinterpret the local conditions.

A further point is critical: It is one thing to travel and see; it is another thing to understand what you see. There is an old Chinese proverb: *What you hear you forget, what you read you remember, but what you draw you understand.*

Students must be trained in seeing and understanding through drawing. It is not difficult to take a photo. The

purpose is not, however, to prove that you were there, but rather to understand the building, at all levels, from main concept to details. And the analytical sketch is the basis for this understanding of architecture. Hence the benefit of the study tours: without the experience of buildings in reality, one cannot create the imaginary.

# On Building in Our Time

*Konrad Wachsmann*

- Science and technology bring forward problems whose solution requires exacting studies before final results can be formulated.

- The machine is the tool of our time. It is the cause of every effect manifested in the social order.

- New materials, methods, processes, knowledge of statistics and dynamics, planning techniques, and new social conditions must be accepted.

- Buildings should develop indirectly, as a result of the multiplication of cells and elements, in accordance with the laws of industrialization.

- Modular systems of coordination, scientific methods of experimentation, laws of automation and precision influence creative thinking.

- Highly complex problems of statics and mechanics demand the closest cooperation between industry and specialists organized in ideal master teams.

- Humane and aesthetic ideas will gain new impetus through the unpromising application of contemporary knowledge and resources.

These seven maxims serve as a fundamental explanation of my work....

In order to clarify my thesis I will describe my own vision of the development of building in the future.

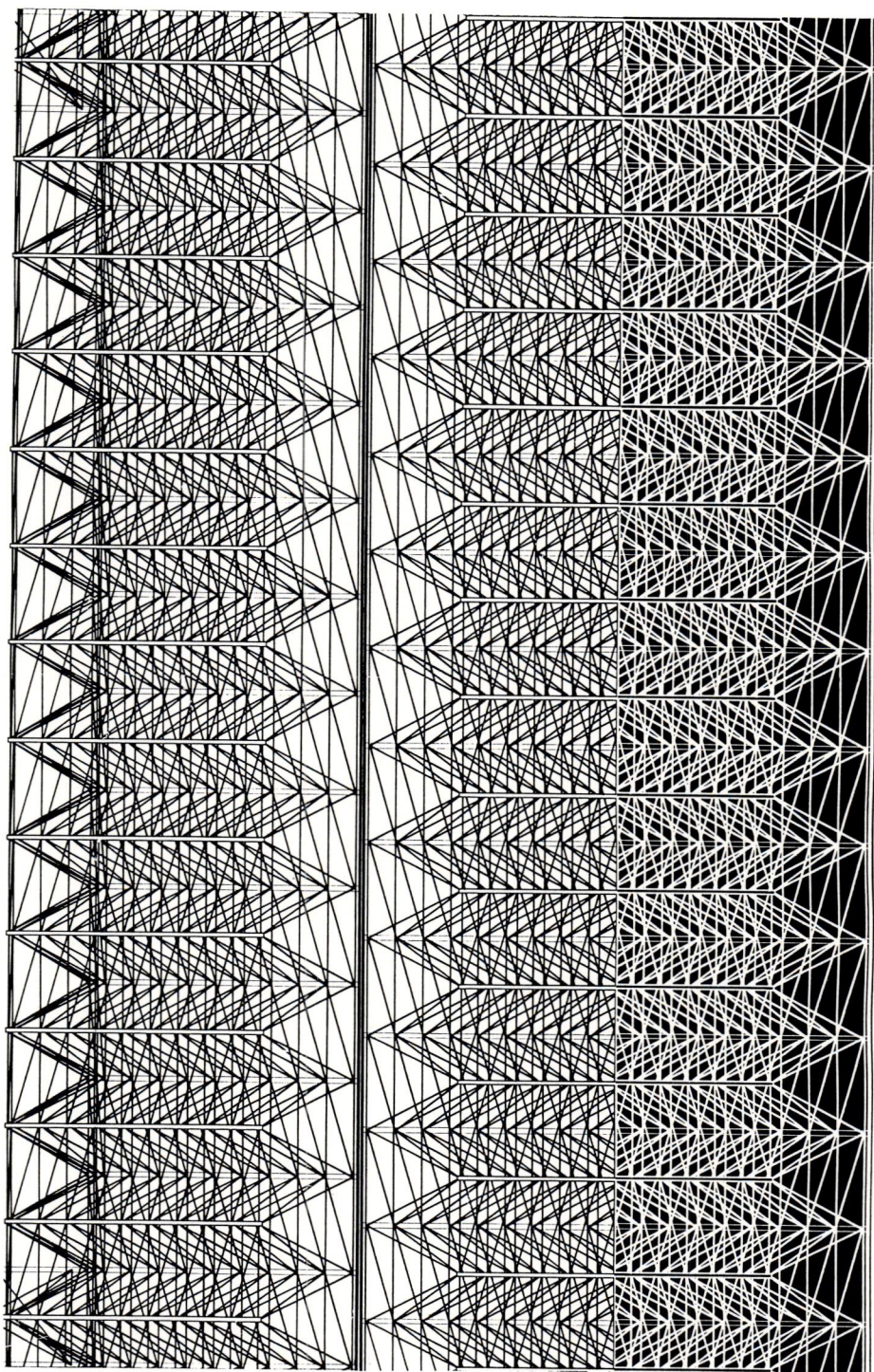
The preparations will be more complex, but the designer's constructional ideas will become much simpler. I cannot recall ever having seen a building that was *too* simple. I have mainly seen buildings that were not simple enough. But when I saw a truly simple building, I always found it very beautiful. I decline to make a distinction between simple and naive. Naiveté is a virtue.

And I believe that truly modern building in the future will be less refined, and for this reason more naive.

The use of beams will disappear more and more. They will be replaced by horizontal slabs. Columns will also be thought of differently in the future than they now are. They will disappear almost entirely, until we no longer notice them even when they are there. Likewise, what we conceive of as walls, windows, and doors will change. I can imagine that only planes will exist: opaque, transparent, and movable. There will be openings and dynamic space. The mechanical installations of our structures will extend into unbelievably complicated systems, primarily in horizontal planes. But these slabs will also take very substantial loads. We will probably repress that which is often emphasized in the vertical.

In terms of structure, the tendency to follow the loads transmitted will probably govern. This may also lead to the systemized concentration of stresses in points. More and more, masses will dissolve into the smallest members which distribute space. These will meet at joints and thus create the impression of points in space bound by imaginary lines. Materials distributed along these imaginary lines will again produce stresses through their own inflection and deformation. Curved and combined elements and projections will replace the columns and horizontal beams still acceptable today. We are generally persuaded already that the classical language of architecture is no longer precise enough to satisfy today's creative challenges. It is likewise difficult to







imagine that any conception of a truly modern building could be realized by means of conventional or classical construction methods. This persuasion may be the reason that we tend today to accept large and pure technical constructions and dynamic mechanical machines as truly appropriate and modern.

Surface articulation will as good as disappear shortly; smooth surfaces will dominate. We are approaching a period in which people will again be able to recognize the play of lines created by joints and surface areas. Such weightless, massless planes will govern structures. More than ever before, lightness will be characteristic. Forces and weights will be suspended. One of the central ideas of future architecture will be the differentiation and separation of each object and each function, in detail and as a whole.

I will not go into how people will live together, nor into a discussion of urban and rural planning, nor of traffic problems. But I know that someday an order will prevail based on the repetition of a nucleus, a structural core of connections. It will be an order which informs the surfaces, structures, rooms, buildings, streets, plazas, parks, and cities and ultimately the whole panorama of the civilized world.

And here one hopes that the artist will come forward to translate facts and functions into the abstract language of art by exercising his genius and vision: then the history of art will begin anew.

Living as we do under such circumstances, and in preparation for this future condition, we must be satisfied with following functions and remaining impersonally objective and modest in our actions.

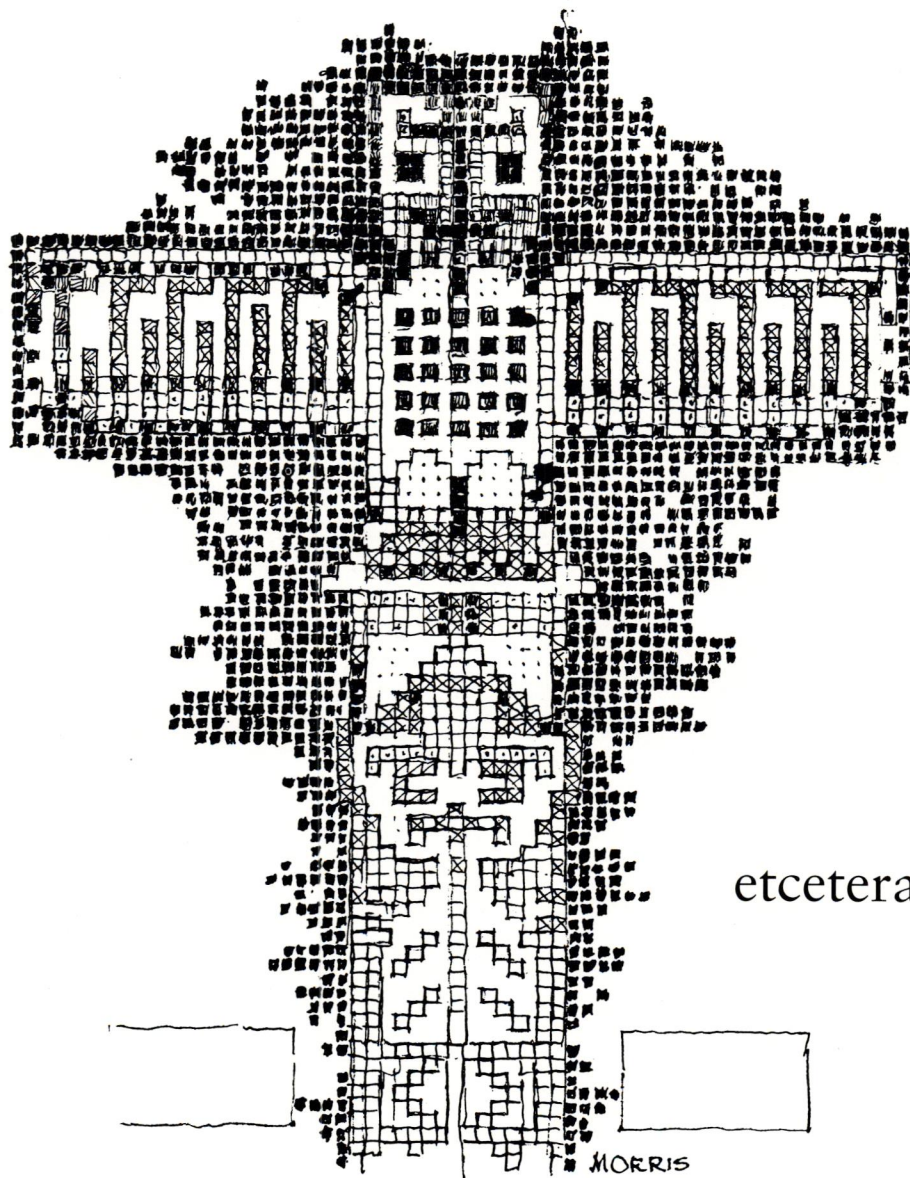
The effect follows the cause, 'form follows function'. As long as human beings have to adapt to new insights and scientific discoveries and to devote themselves to the study and analysis of

practical experience, the dynamic condition celebrated in Sullivan's maxim will exist. And when they recognize their limitations, based on their own ability to understand, and thus become able to master all the surrounding factors not only technically but also socially and emotionally, then an ideal situation will become foreseeable. Then function will follow form, and causes will be subordinate to effects.

I can imagine no higher goal toward which mankind should strive.

*Reprinted from Architecture Culture 1943-1968: A Documentary Anthology, ed. Joan Ockman (New York: Columbia Books of Architecture/Rizzoli, 1993). Translated by Lynnette Widder. The essay was originally published as "Vom Bauen in unserer Zeit," in Baukunst und Werkform (January 1957). Courtesy of Judith Wachsmann.*





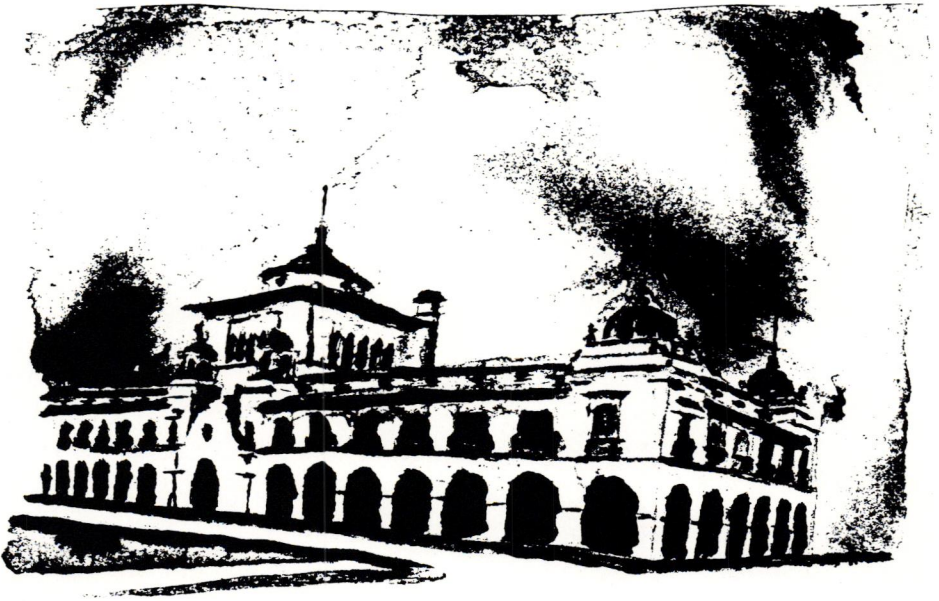
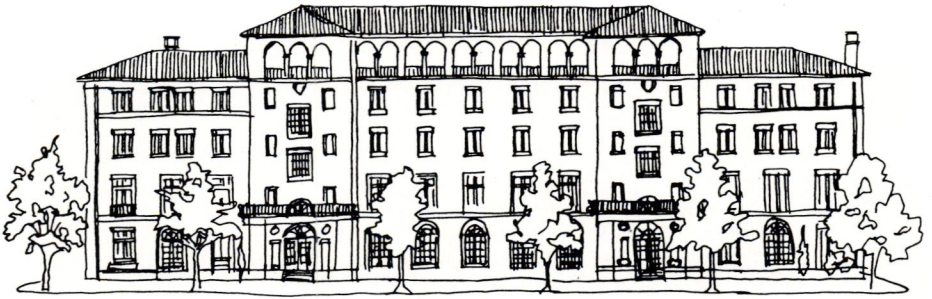
etcetera

# California Sketches



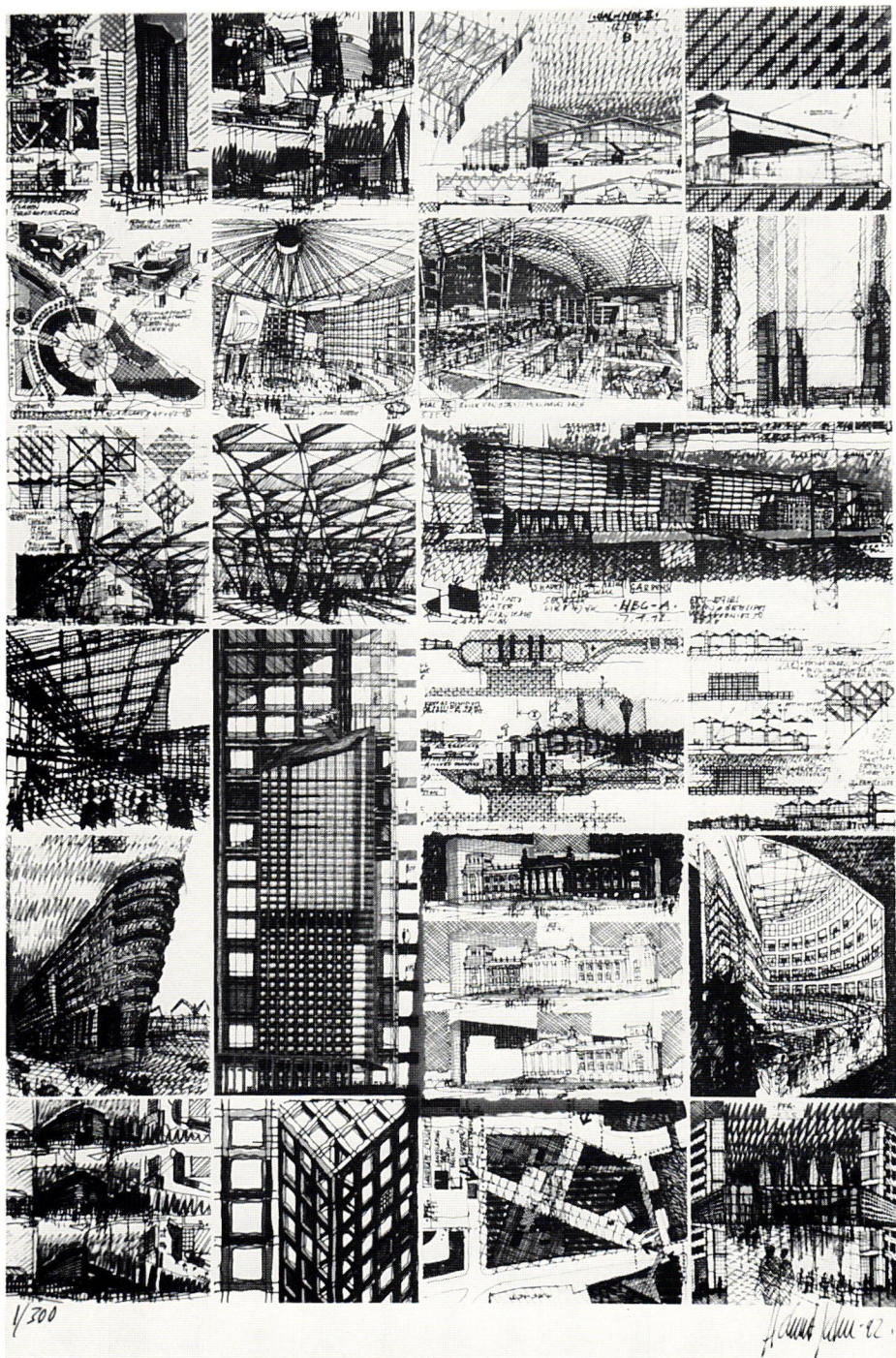
*etcetera* frontispiece, Edwin Bateman Morris, Sr., sketch of tile wall treatment of Hiram Johnson High School, Sacramento. Satterlee and Tomich, architects. This page, Robert Dannenbrink, *Balboa Pavilion*, Newport Beach, Main Street Promenade.





Sketches of projects by Julia Morgan. Above, Kristin Alberton, *Hollywood Studio Club*, 1926. Middle, Diane Favro, *Long Beach YMCA*, 1925. Below, Cheryl Steinkamp, *Examiner Building*, 1915, Los Angeles. Three in a series of sketches of the work of women architects drawn by women architects, to benefit the student scholarship fund of the Association for Women in Architecture.





Helmut Jahn, *Projects 1992*. Lithographic print, from ink and colored pencil. One of the over two hundred drawings and limited edition prints in the International Architectural Exhibition and Sale, held to benefit the student scholarship fund of the Southern California Institute of Architecture.



# Beyond *Blade Runner*: Urban Control, The Ecology of Fear

Mike Davis

*In these excerpts from the longer post-rebellion essay originally printed in the Open Magazine Pamphlet Series, Mike Davis analyzes the urban forms produced out of an "ecology of fear." Here he describes three of the many concentric zones on his "'Gibsonian' map to a future Los Angeles."*

## 1. BEYOND *BLADE RUNNER*

Every American city has its official insignia and slogan, some have municipal mascots, colors, songs, birds, trees, even rocks. But Los Angeles alone has adopted an official Nightmare.

In 1988, after three years of debate, a galaxy of corporate and civic leaders submitted to Mayor Bradley a detailed strategic plan for Southern California's future. Although most of *L.A. 2000: A City for the Future* is devoted to hyperbolic rhetoric about Los Angeles's irresistible rise as a "world crossroads," a section in the epilogue (written by historian Kevin Starr) considers what might happen if the city fails to create a new "dominant establishment" to manage its extraordinary diversity. "There is, of course, the *Blade Runner* scenario: the fusion of individual cultures into a demonic polyglottism ominous with unresolved hostilities."

*Blade Runner*—L.A.'s own dystopic alter ego....

With Warner Bros.'s release of the original (more hardboiled) director's cut a few months after the 1992 Los Angeles uprising, Ridley Scott's 1982 film

version of the Philip K. Dick story ("Do Androids Dream of Electric Sheep?") reasserts its sovereignty over our increasingly troubled sleep. Virtually all ruminations about the future of Los Angeles now take for granted the dark imagery of *Blade Runner* as a possible, if not inevitable, terminal point of the land of sunshine....

Ridley Scott's particular 'gigantesque caricature' may capture ethno-centric anxiety about polyglottism run amuck but it fails to imaginatively engage the real Los Angeles landscape—especially the great unbroken plains of aging bungalows, dingbats, and ranch-style homes—as it socially and physically erodes into the twenty-first century.

In my recent book on Los Angeles I enumerate various tendencies toward the militarization of this landscape.<sup>1</sup> Events since the uprising of Spring 1992—including a deepening recession, corporate flight, savage budget cuts, a soaring homicide rate (despite the black gang truce), and a huge spree of gun-buying in the suburbs—only confirm that social polarization and spatial apartheid are accelerating. It seems quite possible that Los Angeles 2019 could well stand in a dystopian relationship to any ideal of the democratic city.

But what kind of cityscape, if not *Blade Runner*, would this malign evolution of inequality produce? Instead of seeing the future merely as a grotesque, Wellsian magnification of technology and architecture, I have tried to carefully extrapolate existing spatial tenden-

cies in order to glimpse their emergent pattern. William Gibson, in *Neuromancer* and other novels, has provided stunning examples of how realist, 'extrapolative' science fiction can operate as prefigurative social theory, as well as an anticipatory opposition politics to the cyber-fascism lurking over the next horizon.

In what follows, I offer a 'Gibsonian' map to a future Los Angeles that is already half-born. Paradoxically, the literal map itself, although inspired by a vision of Marxism-for-cyberpunks, looks like nothing so much as the venerable "combination of half-moon and dart board" that Ernest W. Burgess of the University of Chicago long ago made "the most famous diagram in social science."

For those unfamiliar with the legacy of the Chicago School of Sociology and their canonical study of the "North American city," let me just say that Burgess's dart board represents the five concentric zones into which the struggle for the survival of the fittest (as imagined by Social Darwinists) supposedly sorts urban social classes and housing types. It portrays a 'human ecology' organized by biological forces of invasion, competition, succession, and symbiosis. My remapping of the urban structure takes Burgess back to the future. It preserves such 'ecological' determinants as income, land value, class and race, but adds a decisive new factor: fear.

## 2. SCANSCAPE

Is there any need to explain *why* fear eats the soul of Los Angeles?

The current obsession with personal safety and social insulation is only exceeded by the middle-class dread of progressive taxation. In the face of unemployment and homelessness on scales not seen since 1938, a bipartisan con-

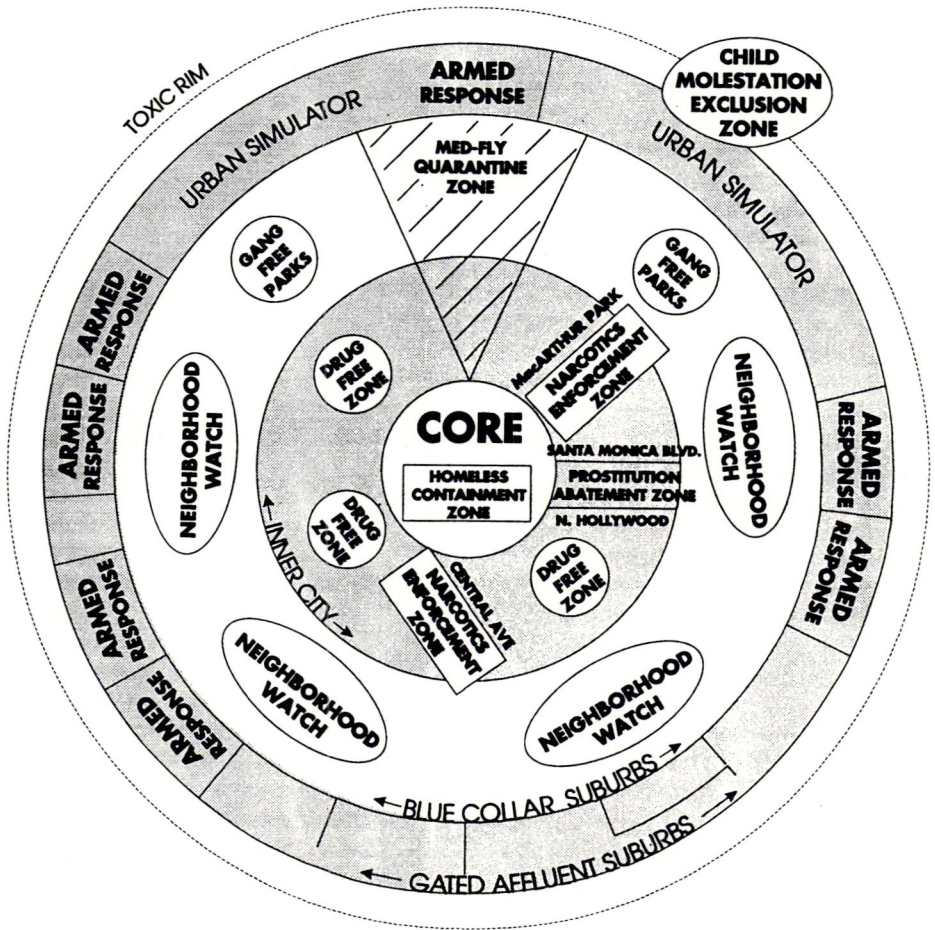
sensus insists that the budget must be balanced and entitlements reduced. Refusing to make any further public investment in the remediation of underlying social conditions, we are forced instead to make increasing private investments in physical security. The rhetoric of urban reform persists, but the substance is extinct. "Rebuilding L.A." simply means padding the bunkers.

As city life, in consequence, grows more feral, the different social milieux adopt security strategies and technologies according to their means. Like Burgess's original dartboard, the resulting pattern condenses into concentric zones. The bull's eye is Downtown.

In another essay I have recounted in detail how a secretive, emergency committee of Downtown's leading corporate landowners (the so-called Committee of 25) responded to the perceived threat of the 1965 Watts Rebellion.<sup>2</sup> Warned by the law-enforcement authorities that a black 'inundation' of the central city was imminent, the Committee of 25 abandoned redevelopment efforts in the old office and retail core. They then used the city's power of eminent domain to raze neighborhoods and create a new financial core a few blocks further west. The city's redevelopment agency, acting virtually as their private planner, bailed out the Committee of 25's sunk investments in the old business district by offering huge discounts, far below market value, on parcels in the new core.

Key to the success of the entire strategy (celebrated as Downtown L.A.'s "renaissance") was the physical segregation of the new core and its land values behind a rampart of regraded palisades, concrete pillars, and freeway walls. Traditional pedestrian connections between Bunker Hill and the old core were removed, and foot traffic in the new financial district was elevated above the street on pedways whose access was controlled by the security systems of individual skyscrapers. This radical privatization of





## THE ECOLOGY OF FEAR

Downtown public space—with its ominous racial undertones—occurred without significant public debate or protest.

Last year's riots, moreover, have only seemed to vindicate the foresight of Fortress Downtown's designers. While windows were being smashed throughout the old business district along Broadway and Spring streets, Bunker Hill lived up to its name. By flicking a few switches on their command consoles, the security staffs of the great bank towers were able to cut off all access to their expensive real estate. Bullet-proof steel doors rolled down over street-level entrances, escalators instantly stopped, and electronic locks sealed off pedestrian

passageways. As the *Los Angeles Business Journal* pointed out in a special report, the riot-tested success of corporate Downtown's defenses has only stimulated demand for new and higher levels of physical security.

In the first place, the boundary between architecture and law enforcement is further eroded. The LAPD has become a central player in the Downtown design process. No major project now breaks ground without their participation, and in some cases, like the recent debate over the provision of public toilets in parks and subway stations (which they opposed), they openly exercise veto power.

Secondly, video monitoring of Downtown's redeveloped zones has been extended to parking structures, private sidewalks, plazas, and so on. This comprehensive surveillance constitutes a virtual *scanscape*—a space of protective visibility that increasingly defines where white-collar workers and middle-class tourists feel safe Downtown. Inevitably the workplace or shopping mall video camera will become linked with home security systems, personal 'panic buttons', car alarms, cellular phones, and the like, in a seamless continuity of surveillance over daily routine. Indeed, yuppies' lifestyles soon may be defined by the ability to afford *electronic guardian angels* to watch over them....

Thirdly, tall buildings are becoming increasingly sentient and packed with deadly firepower. The skyscraper with a computer brain in *Die Hard I* (actually F. Scott Johnson's Fox-Periera Tower) anticipates a possible genre of architectural anti-heroes as *intelligent buildings* alternately battle evil or become its pawns. The sensory system of the average office tower already includes panoptic vision, smell, sensitivity to temperature and humidity, motion detection, and, in some cases, hearing. Some architects now predict the day when the building's own AI security computer will be able to automatically screen and identify its human population, and, even perhaps, respond to their emotional states (fear, panic, etc.). Without dispatching security personnel, the building itself will manage crises both minor (like ordering street people out of the building or preventing them from using toilets) and major (like trapping burglars in an elevator).

When all else fails, the smart building will become a combination of bunker and fire-base. When the federal Resolution Trust Corp. recently seized the assets of Columbia Savings and Loan Association they discovered that

the CEO, Thomas Spiegel, had converted its Beverly Hills headquarters into a secret, 'terrorist-proof' fortress. In addition to elaborate electronic security sensors, a sophisticated computer system that tracked terrorist incidents over the globe, and an arms cache in its parking structure, the 8900 Wilshire building also has Los Angeles's most unusual executive washroom....with a bullet-proof shower. In the event an alarm was sounded, secret panels in the shower walls would open, behind which high-powered assault rifles would be stored.

### 3. FREE FIRE ZONE

Beyond the scanscape of the fortified core is the halo of barrios and ghettos that surround Downtown Los Angeles. In Burgess's original Chicago-inspired schema this was the "zone of transition": the boarding house and tenement streets, intermixed with old industry and transportation infrastructure, that sheltered new immigrant families and single male laborers. Los Angeles's inner ring of freeway-sliced Latino neighborhoods still recapitulate these classical functions. Here in Boyle and Lincoln Heights, Central-Vernon, and MacArthur Park are the ports of entry for the region's poorest immigrants, as well as the low-wage labor reservoir for Downtown's hotels and garment sweatshops. Residential densities, just as in the Burgess diagram, are the highest in the city. (According to the 1990 Census one district of MacArthur Park is nearly 30 percent denser than Midtown Manhattan!)

Finally, just as in Chicago in 1927, this tenement zone ("where an inordinately large number of children are crowded into a small area") remains the classic breeding ground of teenage street gangs (over one-hundred according to L.A. school district intelligence). But while "Gangland" in 1920s Chicago



was theorized as essentially *interstitial* to the social organization of the city..., a gang map of Los Angeles today is coextensive with the geography of social class. Tribalized teenage violence now spills out of the inner ring into the older suburban zones; the Boyz are now in the 'Hood where Ozzie and Harriet used to live.

For all that, however, the inner ring remains the most dangerous sector of the city. Ramparts Division of the LAPD, which patrols just west of Downtown, regularly investigates more homicides than any other neighborhood police jurisdiction in the nation. Nearby MacArthur Park, once the jewel in the crown of L.A.'s park system, is now a free-fire zone where crack dealers and street gangs settle their scores with shotguns and uzis. Thirty people were murdered there in 1990....

Slumlords, meanwhile, are mounting their own private reign of terror against drug-dealers and petty criminals. Faced with new laws authorizing the seizure of drug-infested properties, they are hiring goon squads and armed mercenaries to 'exterminate' crime in their tenements....

Apart from these rent-a-thugs, the Inner City also spawns a vast cottage industry that manufactures bars and grates for home protection. Indeed most of the bungalows in the inner ring now tend to resemble cages in a zoo. As in a George Romero movie, working-class families must now lock themselves in every night from the zombified city outside. One inadvertent consequence has been the terrifying frequency with which fires immolate entire families trapped helpless in their barred homes.

The *prison cell house* has many resonances in the landscape of the inner city. Before the Spring uprising most liquor stores, borrowing from the precedent of pawnshops, had completely caged in the area behind the counter, with firearms discretely hidden at strate-

gic locations. Even local greasy spoons were beginning to exchange hamburgers for money through bullet-proof acrylic turnstiles. Windowless concrete-block buildings, with rough surfaces exposed to deter graffiti, have spread across the streetscape like acne during the last decade. Now insurance companies may make such *riot-proof bunkers* virtually obligatory in the rebuilding of many districts.

Local intermediate and secondary schools, meanwhile, have become even more indistinguishable from jails. As per capita education spending has plummeted in Los Angeles, scarce resources have been absorbed in fortifying school grounds and hiring armed security police. Teenagers complain bitterly about overcrowded classrooms and demoralized teachers on decaying campuses that have become little more than daytime detention centers for an abandoned generation. The schoolyard, meanwhile, has become a killing field. Just as their parents once learned to cower under desks in the case of an atomic bomb attack, so students today are "taught to drop at a teacher's signal in case of...a driveby shooting—and stay there until they receive an all-clear signal."

Federally subsidized and public housing projects, for their part, are coming to resemble the infamous 'strategic hamlets' that were used to incarcerate the rural population of Vietnam. Although no L.A. housing project is yet as technically sophisticated as Chicago's Cabrini-Green, where retinal scans (c.f., the opening sequence of *Blade Runner*) are used to check i.d.s, police exercise increasing control over freedom of movement. Like peasants in a rebel countryside, public housing residents of every age are stopped and searched at will, and their homes broken into without court warrants. In one particularly galling incident, just a few weeks before the Spring riots of 1992, the LAPD arrested more than fifty people in the

course of a surprise raids upon Watts' Imperial Courts project....

#### 4. THE HALF-MOONS OF REPRESSION

In the original Burgess diagram, the "half-moons" of ethnic enclaves ("Deutschland," "Little Sicily," "the Black Belt," etc.) and specialized architectural ecologies ("residential hotels," "the two flat area," etc.) cut across the "dartboard" of the city's fundamental socio-economic patterning. In contemporary metropolitan Los Angeles, a new species of special enclave is emerging in sympathetic synchronization to the militarization of the landscape. For want of a better generic appellation, we might call them "social control districts" (SCDs). They merge the sanctions of the criminal or civil code with land-use planning to create what Michel Foucault would undoubtedly have recognized as further instances of the evolution of the "disciplinary order" of the twentieth century....

Currently existing SCDs (simultaneously 'real' and 'ideal') can be distinguished according to their juridical mode of spatial 'discipline'. *Abatement* districts, currently enforced against graffiti and prostitution in sign-posted areas of Los Angeles and West Hollywood, extend the traditional police power over nuisance (the legal fount of all zoning) from noxious industry to noxious behavior. Because they are self-financed by the fines collected or special sales taxes levied (on spray paints, for example), abatement districts allow homeowner or merchant groups to target intensified law enforcement against specific local social problems.

*Enhancement* districts, represented all over Southern California by the 'drug-free zones' surrounding public schools, add extra federal/state penalties or "enhancements" to crimes committed within a specified radius of public insti-

tutions. *Containment* districts are designed to quarantine potentially epidemic social problems, ranging from the insect illegal immigrant, the Mediterranean fruit fly, to the ever increasing masses of homeless Angelinos.

Although Downtown L.A.'s 'homeless containment zone' lacks the precise, if surreal, sign-posting of the state Department of Agriculture's "Medfly Quarantine Zone," it is nonetheless one of the most dramatic examples of a SCD. By city policy, the spillover of encampments into surrounding council districts, or into the tonier precincts of the Downtown scanscape, is prevented by their "containment" (official term) within the over-crowded Skid row area known as Central City East (or the "Nickle" to its inhabitants). Although the recession-driven explosion in the homeless population has inexorably leaked street people into the alleys and vacant lots of nearby inner-ring neighborhoods, the LAPD maintains its pitiless policy of driving them back into the squalor of the Nickle.

The obverse strategy, of course, is the formal *exclusion* of the homeless and other pariah groups from public spaces. A spate of Southland cities, from Orange County to Santa Barbara, and even including the "Peoples' Republic of Santa Monica," recently have passed "anti-camping" ordinances to banish the homeless from their sight. Meanwhile Los Angeles and Pomona are emulating the small city of San Fernando (Richie Valen's hometown) in banning gang members from parks. These "Gang Free Parks" reinforce non-spatialized sanctions against gang membership (especially the recent Street Terrorism Enforcement and Prevention Act or STEP) as examples of 'status criminalization' where group membership, even in the absence of a specific criminal act, has been outlawed....

Meanwhile, post-riot Southern California seems on the verge of creating



yet more SCDs. On the one hand, the arrival of the federal "Weed and Seed" program, linking community development funds to anti-gang repression, provides a new set of incentives for neighborhoods to adopt exclusion and/or enhancement strategies. As many activists have warned, "Weed and Seed" is like a police-state caricature of the 1960s War on Poverty, with the Justice Department transformed into the manager of urban development. The poor will be forced to cooperate with their own criminalization as a precondition for urban aid.

On the other hand, emerging technologies may give conservatives, and probably neo-liberals as well, a real opportunity to test cost-saving proposals for *community imprisonment* as an alternative to expensive programs of prison construction. Led by Heritage Institute ideologue Charles Murray—whose polemic against social spending for the poor, *Losing Ground* (1984), was the most potent manifesto of the Reagan era—conservative theorists are exploring the practicalities of the *carceral city* depicted in sci-fi fantasies like *Escape from New York*.

Murray's concept, as first adumbrated in the *New Republic* in 1990, is that "drug-free zones for the majority" may require social-refuge heaps for the criminalized minority. "If the result...is to concentrate the bad apples into a few hyper-violent, anti-social neighborhoods, so be it." But how will the underclass be effectively confined to its own "hyper-violent" super-SCDs and kept out of the drug-free Shangri-las of the overclass?

One possibility is the systematic establishment of discrete *security gateways* that will use some biometric criterion, universally registered, to screen crowds and bypassers. The "most elegant solution," according to a recent article in the *Economist*, "is a biometric that can be measured without the sub-

ject having to do anything at all." The individually unique cart-wheel pattern of the iris, for example, can be scanned by hidden cameras "without the subject being any the wiser."

Another emerging technology is the police utilization of LANDSAT satellites linked to Geographical Information Systems (GIS). The LANDSAT-GIS capability can surveil the movements of tens of thousands of electronically tagged individuals and their automobiles.

Although such monitoring is immediately intended to safeguard expensive sports cars and other toys of the rich, it will be entirely possible to use the same technology to put the equivalent of an electronic handcuff on the activities of entire social strata. Drug offenders and gang members can be 'bar-coded' and paroled to the omniscient scrutiny of a satellite that will track their twenty-four hour itineraries and automatically sound an alarm if they stray outside the borders of their *surveillance district*. With such powerful Orwellian technologies for social control, community confinement and the confinement of communities ultimately mean the same thing.

## NOTES

1. Mike Davis, *City of Quartz: Excavating the Future in Los Angeles* (New York: Verso, 1990).

2. Mike Davis, "The Infinite Game: Redeveloping Downtown L.A.," in *Out of Site: A Social Criticism of Architecture*, Diane Ghirardo, ed. (Seattle: Bay Press, 1991).

*Davis's essay in its entirety—with sections "5. The Neighbors Are Watching," "6. Mini-Citadels and Geroncrats," "7. Parallel Universes," "8. Hollywood(s): Powers of Simulation," "9. The Toxic Rim," and "10. Before We Wake"—is available from Open Magazine Pamphlet Series, P.O. Box 2726 Westfield, New Jersey 07091.*

# Contextualism: Fact or Fallacy?

Gary R. Collins

*Used to be I couldn't spell contextual; now I wonder if I know what it means.*

Alfred North Whitehead

The quote is, of course, a fiction. However, the great philosopher/mathematician did exercise himself over the meaning of language as a vehicle for the perception of reality. At least, he got people thinking about defining terms, a practice that may now be on the decline.

My own vexation is with the citation of 'contextualism' as a rationale for ignoring or disparaging the existing built and natural environment of a site when either or both fail to jibe with the designer's (or reviewer's) preference of architectural expression, thereby legitimating the invading concept with a claim to a more enlightened reflection of true conditions, *contextwise*.

'Contextual' is one of those chameleon-like words which characterize so much of rarefied architectural discourse and artsy criticism, changing nuance to suit the writer's prejudice, disappearing easily against the foliage of claptrap. In language, more is often less.

Arguably, ours is a pop culture which may be experiencing a degradation of meaning in language that parallels a diminution of critical thinking while slang and colloquial speech rise to the status of scientific and philosophic discourse, wherein precision is assumed about things inherently ephemeral and things amenable of precise definition can be conveniently obfuscated.

Big words don't do anything by themselves, either; they must have *users* interested in communication, a constitu-

ency with a strong consensus about meaning based on some communality of experience and educational background.

Certainly an esoteric vocabulary (jargon) among aficionados of a particular art is a convenient and legitimate shorthand so long as they are communicating about something that matters primarily to themselves, and that is not indulged in to the exclusion of all other discourse. The field of architecture possesses an argot of common use, familiar even among novitiates, which outsiders might fail to clearly grasp. 'Fenestration' is an example that comes readily to mind. This usage does not, however, automatically preclude referring to windows as such when in the company of the uninitiated. On the contrary, good manners demand the translation.

Ironically, as abstraction increases, so does the liability that the emperor may indeed be sparsely attired. The threat of such ideological nudity should give pause to anyone proffering highly refined dogma or abstruse theory in the absence of hard data, regardless of social class, but it seems rarely to have much effect.

Language follows class, most disciplines have their class structure, and ours is no exception. Class structure in architecture is characterized by a ministerial hierarchy through which critics, theoreticians, gurus of style, political animals, leading (name) architects, ordinary practitioners, and camp followers alternately segregate themselves from, or ally with, one another. It follows that they do not all use the same vocabulary with equal ease, precision, or frequency, which leaves room for misunder-



ing all around. The following is something of a case in point.

The Orange County Chapter, AIA, held a design competition several years ago, the guiding principle and title of which was "Architecture in Context: To Explore Built Works in Their Surroundings Casts Light Upon Their Meaning." On the evening before the awards banquet and announcement of the winners, the Chapter invited the panel of distinguished practitioners who acted as jurors to give an exposition of their own perspectives on design 'in context' (as evidenced by presentation of their own previous and current work).

Some offered breathtakingly arcane argument (including 'creationist' views of context), but the avowed intent, other than a chance for locals to meet the celebs, was to clarify the *design criteria* used for selection of winners. This was a good idea, especially since none of the program announcements nor registration materials had specified any, presumably on the premise that everybody already had a thorough grasp of buildings *in context* and how exploration of works so designed "...casts light upon their meaning." Afterwards, the meeting was thrown open to discussion between hopefuls (ordinary practitioners) and jurors ('name' architects and theoreticians). Surprisingly little interaction resulted, possibly due to class and linguistic disparities, and the issues involved in defining context remained fundamentally unexplored. Also, nobody's ox was gored as yet.

Inspection of the many submittal boards on display during the reception revealed an obvious candidate, a resort hotel on a South Pacific island, all thatched and breezy, that looked like the first typhoon would give its structural context negative marks. Okay, but excruciatingly derivative. One of the best of show, in my own opinion, was an outstanding hotel somewhere (guess!) in New Mexico. As usual for

that area, too, it was informed more by regionalism than by any other special context. Laudably, it snared an award of merit.

Except for a custom home in the style of R. Meier(!), the big winners sharing first place were two neighbors within a well known local retail/commercial center, an example of what has come to be known as an 'urban village'. One, a major center for the performing arts, and the other a nearby 'trophy' office tower and parking structure, are both excellent but very disparate statements, each of which the jury decided was somehow informed by the same context. Or do they majestically *create* a more urban context, cast as they are among such general mediocrity? Regardless of its overall quality, their neo-urban context was set in motion by its developer and maintained by subsequent architectural, commercial, and social influences long before their arrival, fitting as their presence seems to be. They may respond well to program, category of use, and the checklist of edge conditions, access, topography, etc., but does adequate response to these traditional design influences, which we are expected to deliver as a minimum standard of professional competence, generate the conditions whose successful product is perforce contextual, or are we looking for a more restrictive spiritual use of the term as regards aesthetics?

Speaking as an 'ordinary' practitioner, I believe our own submittal was contextual to the max, irrespective of my efforts in molding its aesthetic details. The site is in a unique historic neighborhood consisting primarily of a variety of single family bungalow styles (including some 'regional' examples) popular during the period spanning from about 1890 through 1935, and the solution comprises five duplexes which, incidentally, create a *de facto* micro-neighborhood. The community was well

organized, complete with an advisory design review committee and a slate of local activists with a spectrum of personal tastes and private agendas to spice up their general consensus on neighborhood preservation.

The locally-based developer-client's goal was to create a salable upscale multifamily product to maximize dollar return and appease the locals as much as is required politically in order to wheedle permits from the city. There were, in effect, two clients—one paying, and one pro-bono (the community)—with very different perspectives. It was clear that we would not have the freedom to *create* a new architectural context.

The challenge was to snatch contextualism from a variety of common but not always compatible sub-contexts. First, as designer, my own view of *architectural contextualism* in this case required squaring my commitment to personal stylistic and theoretical leanings with the character of existing housing, and I chose a kind of stylistic averaging along Postmodern lines rather than either a literal emulation of extant archetypes or willful trailblazing. Furthermore, the *social context* dictated satisfying local activists that we had their interests at heart, too, and would do our best to conform to neighborhood scale and character; the *market context* required sensitivity to the projected buyer profile characterized in a thorough market study evidencing comps from beyond the neighborhood; the *client context*, as usual, encouraged maximizing density to buffer profit margins, control construction cost, and satisfy their in-house tastes and prejudices; the *bureaucratic context* involved intense coordination and review for unique code conformance and agency process scheduling; the *political context* meant assisting the client to give city fathers credible justification for final approvals over continuing objections

from some of the community; the *ethical context* consisted of actually facilitating balance between the interests of both our client and a highly sensitized community, despite inevitable conflicts; and, finally, of course, the *physical site context* demanded attention to the typical array of site influences.

To the extent that these are all conditions that had to be addressed in the design process, each is a discreet component deserving use of the general term 'context'. More importantly, however, we thought we had created an outstanding total project, which evolved strenuously from a demanding assignment—not a masterpiece, but solid concept, massing, and detailing which represented a *master contextual response* worthy of the name. *Voila!* A winner! Regrettably, not. Despite our litany of attributes, our ox got gored.

Of course, whenever submitting a project to the judgment of peers, one must acknowledge the possibility that their evaluation of its merits may not be as rosy as one's own. It may also be that when a local chapter solicits the review of indigenous effort by a galaxy of eminent jurists from outside the area, 'them furriners' may adjudge that the submissions responding most completely to the theme of the competition should be eliminated because they are otherwise unremarkable. It's even possible that few local firms had any strong conviction about their project's candidacy as an example of the theme in the first place, and simply submitted their best work. Orange County has, after all, despite rumors to the contrary, its fair share of excellent design firms, and the competition was also open to outsiders with associations in the chapter.

The competition was one of the best organized and executed programs in recent chapter history. Ideally, however, the bottom line should have been that all players come away with a stronger philosophical and theoretical notion



of what context and contextualism mean for architecture. If this kind of exercise doesn't add to consensus on design process and agreement on use of terms admitted to yeoman status in our working vocabulary, why spend the time or money?

I think there is general agreement that PR and ego gratification among ones peers are not sole justification for the activities a professional society. Whether the term merits an '...ism' or not, I submit that investigation of context got lost in the promotional furor, perhaps because it's a bit of a chimera anyway.

Identification of physical context of building is important to everybody associated with the industry of which we are a part. Building always involves a site. Zoning codes are a glaringly simplistic example of that concern, attempting to define and control land use contexts which are considered, rightly or wrongly, exclusive. Sales and marketing play to context, and a coterie of consultants make a decent living helping developers find peace of mind matching product to the demands (read *history*) of the marketplace, especially as it devolves on location, location, location. Bureaucrats and marketing gurus, at least, appear to have no problem relating the value of their insights to their own and their constituency's viewpoints of context.

Architects, it seems to me, must clarify the usage of context within architecture through a stringent dialogue that focuses on understanding the symbolic *essence* of a place and its temporal relationships. Contextualism as a construct is also most useful, I think, when separated from *regionalism*, a related but different idea. Isn't regionalism a more geographically inclusive term that involves cultural and historic connections, but further encompasses a general climatic response, broad territorial dispersal of characteristic archetypes, and

references to a palette of indigenous materials? True, these describe a context, but so do 'earth' and 'solar system'. Furthermore, confusing them may yield such concoctions as 'regional contextualism' or worse, 'contextual regionalism'.

For a work of architecture to be truly contextual in this writer's view, it must express specific *symbolic* and *scalar* affinities for its locus as well as the purely physical links of the site to its neighborhood (exclusive of its program) that together yield a *character it could not otherwise have*.

Contextualism inevitably implies a social and/or geophysical history that should be clearly identified in a work of architecture, without resorting to verbiage claiming to *create* a superior context where only a banal or null 'context' had previously existed or to reify a pretender when its signal contextual eligibility is conformance to type, local zoning, and the marketplace. Individual new buildings, no matter how well designed, do not *create* context. Nor are building complexes within established communities contextually appropriate simply because they are large and coherent. They may be adjudged by history as the progenitor or archetype of a unique community, but in their own time they either respond to a pre-existing context, lay revolutionary siege, or remain context-less until the judgment of posterity is rendered. The claim of contextual genesis for a work of design made either by practitioners or their critics amounts to a kind of preemption of the future, an elitist conceit that claims more for architecture than any of us are likely to deliver by intent.

Unless we are willing to engage in a serious dialogue regarding the meaning of concepts such as contextualism that we purportedly use to guide and then evaluate the substance of our work, we may be well advised to quit using such terms in any special sense altogether.

# Typophoto

Lazlo Moholy-Nagy

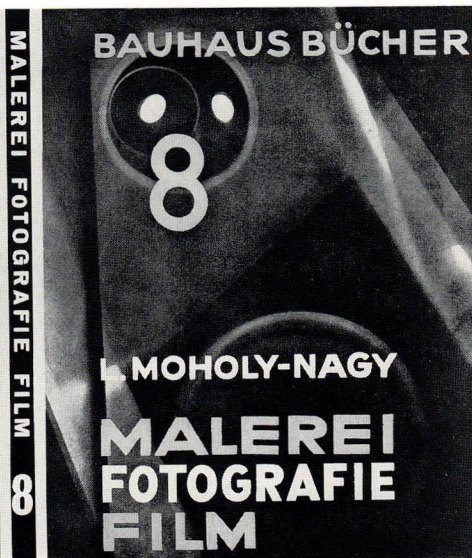
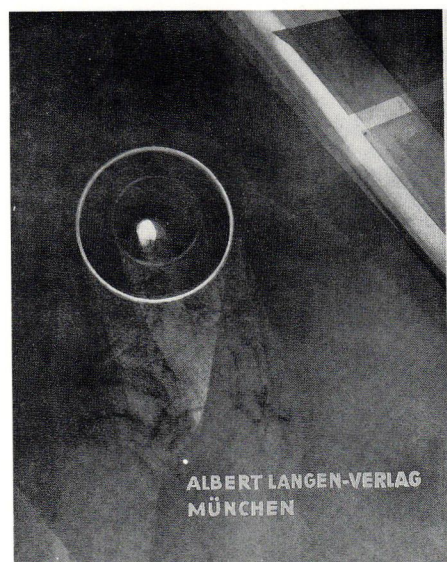
Neither curiosity nor economic considerations alone but a deep human interest in what happens in the world has brought about the enormous expansion of the news service: typography, the film, and the radio.

The creative work of the artist, the scientist's experiments, the calculations of the businessman or the present-day politician, all that moves, all that shapes, is bound up in the collectivity of interacting events. The individual's immediate action of the moment always has the effect of simultaneity in the long term. The technician has his machine at hand: satisfaction of the needs of the moment. But basically much more: he is the pioneer of the new social stratification; he paves the way for the future.

The printer's work, for example, to which we still pay too little attention has just such a long-term effect: interna-

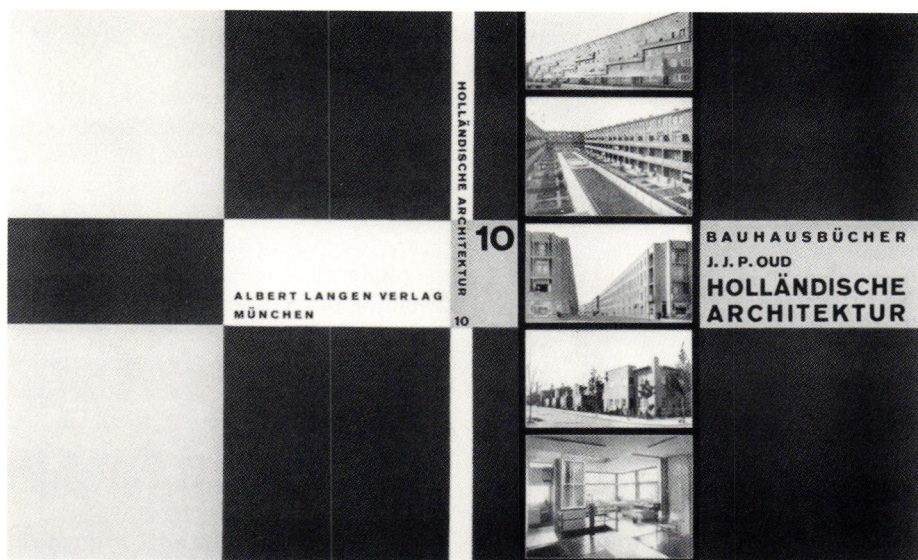
tional understanding and its consequences.

The printer's work is part of the foundation on which the new world will be built. Concentrated work of organization is the spiritual result that brings all elements of human creativity into a synthesis: the play instinct, sympathy, inventions, economic necessities. One man invents printing with movable type, another photography, a third screen printing and stereotype, the next electrotrope, phototype, the celluloid plate hardened by light. Men still kill one another; they have not yet understood how they live, why they live; politicians fail to observe that the earth is an entity, yet television has been invented: the 'Far Seer'—tomorrow we shall be able to look into the heart of our fellowman, be everywhere and yet be alone; illustrated books, newspapers, magazines are



Laszlo Moholy-Nagy, dust jacket for *Malerei, Fotografie, Film*, 1927.





Laszlo Moholy-Nagy, dust jacket for *Holländische Architektur*, 1926.

printed—in millions. The unambiguousness of the real, the truth in the everyday situation is there for all classes. *The hygiene of the optical, the health of the visible, is slowly filtering through.*

What is typophoto?

Typography is communication composed in type.

Photography is the visual presentation of what can be optically apprehended.

*Typophoto is the visually most exact rendering of communication.*

Every period has its own optical focus. Our age: that of the film, the electric sign, simultaneity of sensorily perceptible events. It has given us a new, progressively developing creative basis for typography too. Gutenberg's typography, which has endured almost to our own day, moves exclusively in the linear dimension. The intervention of the photographic process has extended it to a new dimensionality, recognized today as total. The preliminary work in this field was done by the illustrated papers, posters, and display printing.

Until recently typeface and typesetting rigidly preserved a technique that admittedly guaranteed the purity of the

linear effect but ignored the new dimensions of life. Only quite recently has there been typographic work that uses the contrasts of typographic material (letters, signs, positive and negative values of the plane) in an attempt to establish a correspondence with modern life. These efforts have, however, done little to relax the inflexibility that has hitherto existed in typographic practice. An effective loosening-up can be achieved only by the sweeping and all-embracing use of the techniques of photography, zincography, the electroplate, etc. The flexibility and elasticity of these techniques bring with them a new reciprocity between economy and beauty. With the development of *phototelegraphy*, which enables reproductions and accurate illustrations to be made instantaneously, even philosophical works will presumably use the same means—though on a higher plane—as the present-day American magazines. The form of these new typographic works will of course by quite different typographically, optically, and synoptically from the linear typography of today.

Linear typography communicating ideas is merely a mediating makeshift



link between the content of the communication and the person receiving it: COMMUNICATION ← TYPOGRAPHY → PERSON. Instead of using typography—as hitherto—merely as an objective means, the attempt is now being made to incorporate it and the potential effects of its subjective existence creatively into the contents.

The typographical materials themselves contain strongly optical tangibilities by means of which they can render the content of the communication in a directly visible—not only in an indirectly intellectual—fashion. Photography is highly effective when used as typographical material. It may appear as illustration beside the words, or in the form of ‘*phototext*’ in place of words, as a precise form of representation so objective as to permit of no individual interpretation. The form, the rendering is constructed out of the optical and associative relationships: into a visual, associative, conceptual, synthetic continuity: into the typophoto as an unam-

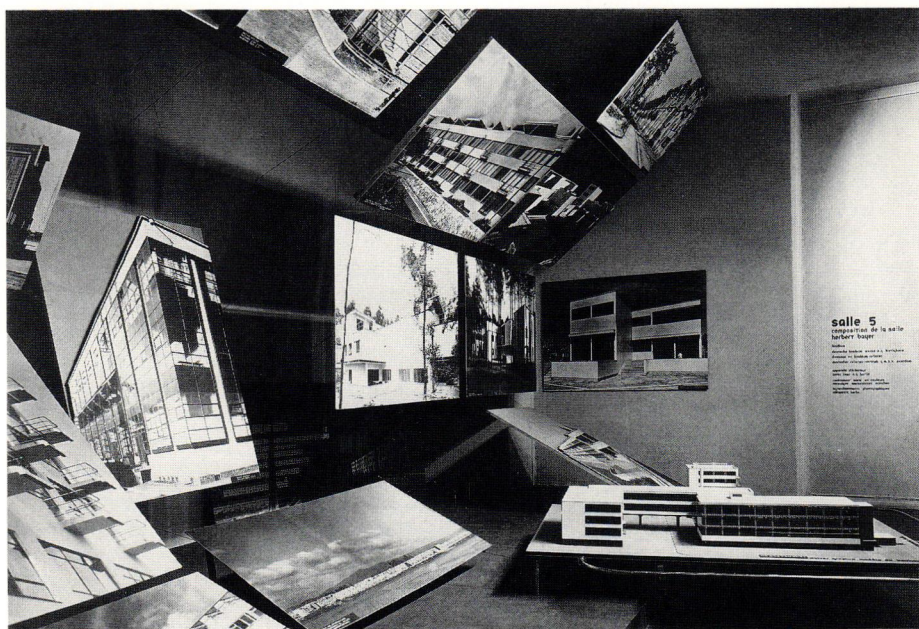
biguous rendering in an *optically* valid form.

The typophoto governs the new tempo of the new visual literature.

In the future every printing press will possess its own block-making plant, and it can be confidently stated that the future of typographic methods lies with the photo-mechanical processes. The invention of the photographic typesetting machine, the possibility of printing whole editions with x-ray radiography, the new cheap techniques of block making, etc., indicate the trend to which every typographer or typophotographer must adapt himself as soon as possible.

This mode of modern synoptic communication may be broadly pursued on another plane by means of the kinetic process, the film.

“*Typophoto*” is reprinted from Moholy-Nagy’s 1925 text *Malerei, Fotografie, Film*, trans. Janet Seligman, *Bauhausbücher 8* (Cambridge: The MIT Press, 1969).



Herbert Bayer and Laszlo Moholy-Nagy Exhibition design at the *Société des artistes décorateurs français*, Paris 1930.



# Letters

Dear Editor,

As I read the May edition of *Architecture California*, I am impressed once again with the wonderful job you, your staff, and the Editorial Board do in publishing this important magazine.

Architecture (and the AIA) greatly benefit from the thoughtful and thought-provoking articles in each issue. Thank goodness that there is a forum for something more about architecture than just building facades.

You've set an important precedent for others to follow—that architecture is about aesthetics, people, joy, and discussion of important issues in an informed manner.

And, congratulations too on *etcetera*. It's a wonderful potpourri for ideas

and, particularly, for sketches. *Architecture without sketches is a profession without sunshine!*

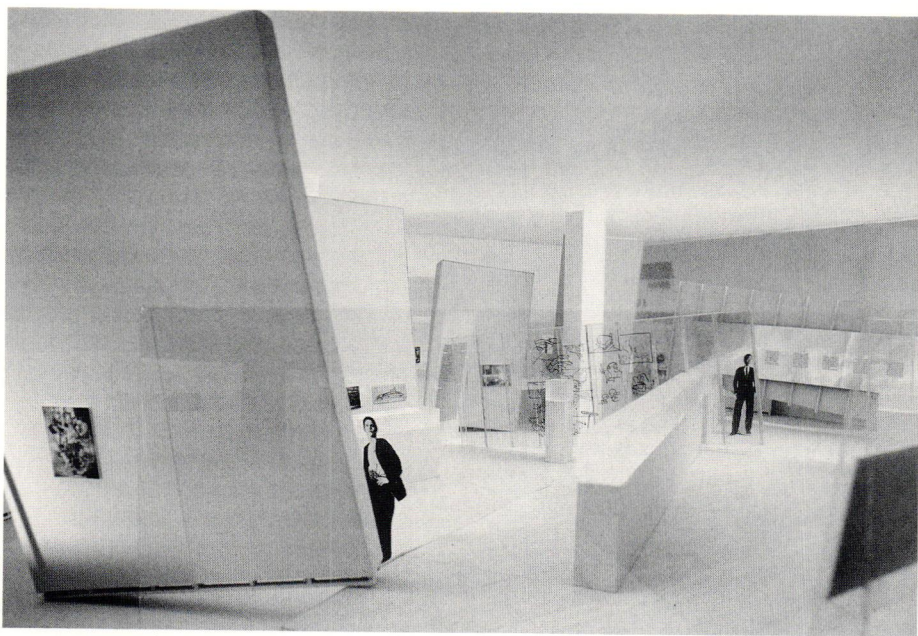
Great job!

Virgil R. Carter, FAIA  
Group Vice President  
The American Institute of Architects  
Washington

Dear Editor,

I read with great interest, in the May 1993 issue, Kurt Forster's provocative essay on the American Campus. His discussion of the 'Grand Plan' and 'College Land' impugns the validity of these models for institutional campus design.

Robert F. Dannenbrink, Jr.  
AICP, Assoc. AIA, SCUP  
Irvine



Model Design of the exhibition *Expressionist Utopias: Paradise, Metropolis, Architectural Fantasy* (Los Angeles County Museum of Art, October 21, 1993 to January 2, 1994), designed by Coop-Himmelblau.



W. H. Fletcher, *Beach at South Santa Monica*. California State Library.

#### FOR THE RECORD

*In Allan Sekula's piece, "Fish Story," in the May 1993 edition of Architecture California, one line was dropped from Section I. The entire section should read as follows:*

Growing up in a harbor predisposes one to retain quaint ideas about matter and thought. I'm speaking only for myself here, although I suspect that a certain stubborn and pessimistic insistence on the primacy of material forces is part of a common culture of harbor residents. This crude materialism is underwritten by disaster. Ships explode, leak, sink, collide. Accidents happen everyday. Gravity is recognized as a force. By contrast, airline companies encourage the omnipotence of thought. This is the reason why the commissioner of airports for the city of Los Angeles is paid much more than the commissioner of harbors. The airport commissioner has to think very hard, day and night, to keep all the planes in the air.



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